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INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

Stories of the Week
Gags of the Week
Verse of the Week
Add Newspaper Boners
Lions vs. Browns?
Puns Unlimited
Lowdown on Conventions

Stories of the Week

Although his career as a big-time football coach (Florida, Michigan State) was eminently successful, Charlie Bachman had a bellyful of it.

He quit; and became a home freezer dealer. Thereafter:

For the first time in his life he began to make money. Slept well, too.

But, when tiny Hillsdale College offered him a job as head coach in 1953, the old war horse distended his nostrils, pawed the ground, and was off to the races.

Halfway through the season Charlie told friends:

"Never been so happy in my life. Now, when we lose a game, I can get in my car and drive home. Nobody has let the air out of my tires."

Advance man Ed Killey from the Pittsburgh club in the National Professional Football League cased Briggs Stadium prior to the Steelers-Lions 1953 curtain raiser. Dismayedly he spied signs which blared out in studhorse type:

DETROIT VS PITTSBURG SUNDAY

"I see," he commented, "that already you've knocked the H out of Pittsburgh." P. S.: Detroit won, 39-21.

As a promotional stunt the Cleveland Browns offered all-expenses-paid trips to New York (for the Browns-Giants game, Oct. 25, 1953). The gimmick: guess who would score the first touchdown, how, and in what period.

According to pubrelationsman Russ Guessner 14,103 entrants predicted that Otto Graham would cross the goal line in the first quarter on a sneak. Had that happened, the Browns would have filed a bankruptcy petition.

Fortunately for Guessner (aptly named!) Dante Lavelli tallied the first touchdown. Only two Clevelanders enrolled in this contest guesstimated the results aptly. And Guessner, as you can guess, combed his newly gray hair thankfully.

Gags of the Week

Ira Wolfert's latest novel, "Married Men," comprises 1,007 pages.

Most married men would describe themselves, *as* married men, in 25 words or less.

The father who lost his money in the stockmarket now has a son who loses his in a supermarket.

Verse of the Week

Eavesdropped for years
But never yet
Have I heard the order:
"Martini—wet!"

Add Newspaper Boners

Why Children Turn Vandals—"They admire Football Coach Who Really Trains Them."—*Boston Globe.*

Upset Stomach Licked by Ike; Busy Week.—*Durham Sun.*

Mamie to Yield to Dior.—*New York Enquirer.*

Lions vs. Browns?

Despite the close race in professional football's Eastern and Western Conferences—Detroit's Lions and the Cleveland Browns now can get ready to fight it out for the championship in December.

That's the consensus of nearly 3,000 Westinghouse employes throughout

(Concluded on Page 5, Column 1)

12 Air Conditioned Homes To Be Basis Of NAHB Study

AUSTIN, Texas—Details of what the National Association of Home Builders is planning for its "research village" here to test air conditioning were recently outlined by Ned Cole, chairman of the NAHB committee on air conditioning.

Twelve homes will be air conditioned, all being similar with approximately the same floor area, the same proportion of glass area, etc., but with certain differences in such things as insulation, type of roof, and, of course, air conditioning systems, it was indicated.

"We do not believe sufficient data exists, based on examples, to prove all phases of design for air conditioning," Cole said to explain the purpose of this project.

"We think that such data should be put together in as short a time as possible. We understand," Cole said, "that there is some work that

(Concluded on Page 7, Column 1)

Amana Introduces Freezers, Room Units

AMANA, Iowa — Three new upright freezers and three year-round room air conditioners have been introduced by Amana Refrigeration, Inc. The room coolers, available in ½, ¾, and 1-hp. sizes, mark Amana's return to the air conditioning field.

The new units deliver six different combinations of cooling, heating, and ventilation, each of which may be selected by adjusting one horizontal glider control. All models are equipped with a thermostat, which automatically maintains the desired temperature. When not in use, the illuminated and color-coded glider control is hidden.

Design of the cabinets makes pos-

(Concluded on Back Page, Column 1)

Jay To Make Portable, 2-Section Room Cooler

LONG ISLAND CITY, N. Y.—Jay Broiler Co. here, manufacturer of the "Roto-Broil" line of infrared rotisserie broilers, has attained exclusive national manufacturing and marketing rights for a new type of portable two-section room air conditioner which will be sold under the name "Carti-Aire."

A new corporation, the New-Aire Corp., has been established by Jay Broiler for production of the unit which will be marketed under the Carti-Aire label.

Production of a scheduled 50,000

(Concluded on Page 4, Column 5)

Rich, Packard Head NEMA Major Appliance Division

ATLANTIC CITY — R. A. Rich, vice president of Philco Corp., was elected president of the major appliance division of the National Electrical Manufacturers Association at its annual meeting here.

Rich succeeds J. R. Poteat, general manager of the range and water heater department of General Electric, Louisville.

New vice-chairman of the division is D. A. Packard, general sales manager of Kelvinator.

Members of the household refrigerator section of the division elected F. J. Bommer as chairman. He is vice president of Quicfrez, Inc.

(Concluded on Page 17, Column 2)

ASRE Plans 8 Sessions During Dec. Meeting

WASHINGTON, D. C. — Largest crowd ever to attend a winter meeting of the American Society of Refrigerating Engineers is anticipated at its 49th annual convention to be held Dec. 6 to 9 at the Shoreham hotel here, according to J. Robert Hornaday, program chairman.

For the first time in ASRE history there will be eight sessions, consisting of four regular technical sessions and four informal conferences or symposiums. The technical sessions will provide a wide variety of papers.

The informal sessions will consist of the Domestic Refrigerator Engineering Conference which will discuss recent developments in plastics for refrigerators and home freezers; the Air Conditioner Conference which will discuss packaged air conditioners for commercial and industrial applications.

The third informal session will be a symposium on heat pumps, presided over by Prof. Charles H. Coogan, University of Connecticut, which will be a general discussion of the progress and present status of this much discussed type of equipment;

(Concluded on Page 17, Column 3)

Olympic Enters Room Cooler Field

LONG ISLAND CITY, N. Y. — Morris Sobin, president of Olympic Radio & Television, Inc., announces that his company will enter the room air conditioner field in January with ¾ and 1-ton models.

The air conditioners have been designed by company engineers but will be manufactured for Olympic by other concerns, according to Sobin. Prices have not yet been set.

Sobin said the company will market room air conditioners in an effort to help smooth out seasonal variations in the sale of its products. Sales of radio and TV sets are usually slowest in the summer, when demand for air conditioners is at a peak.

Airtemp Ups Output Of Air-Cooled Home Air Conditioners

CLEVELAND—"In 1954, Chrysler Corp.'s Airtemp Div. will produce four air-cooled residential air conditioners for each water-cooled unit," stated Airtemp's President Carl E. Buchholzer during the All-Industry Air Conditioning Exposition here.

At the same time Buchholzer revealed that next year Airtemp will introduce a new air-cooled air conditioner for installation in stores and buildings.

Airtemp's swing to large-scale production of air-cooled air conditioners is further evidence of a trend now developing within the industry. Since Airtemp's air-cooled models were introduced last May, sales of air-cooled units alone have exceeded sales of water-cooled models by 54%.

Tight water usage curbs in almost every section of the country have encouraged public acceptance of air-cooled air conditioning, Buchholzer said.

Engineering advances in the development of air-cooled models have made them more efficient and more compact, according to Buchholzer.

Record-Breaking Crowds Attend All-Industry Show

CLEVELAND — Crowds of refrigeration and air conditioning people thronged through the Public Auditorium here Monday and Tuesday at the largest and best-attended All-Industry Refrigeration & Air Conditioning Exposition in the history of the event.

Nearly 10,000 persons had registered for the Show by Tuesday night, assuring a record-breaking attendance, show officials declared.

It was announced by Air-Conditioning and Refrigeration Institute that the next All-Industry Show will be held in Atlantic City, N.J. late in

(Complete details on The Show and association meetings including pictures of the host of new products presented, will be published in future issues of the NEWS.)

November of 1955. Many of the 234 (a record) exhibits at the show offered new and improved products for the field. If there was any emphasis on any particular type of product, it was on unit air conditioner equipment.

Many firms who had not been in the field previously were presenting air conditioning products and components for the first time at the show.

Developments in home and automobile air conditioning not only brought about the display of many new products at the show, but presented new problems for discussion by the wholesaler, servicing, and contractor association who met here during the show period.

UsAirco Features Fiberglas Cabinets

MINNEAPOLIS — Fiberglas construction, inside and out, will be featured in the 1954 line of the United States Air Conditioning Corp. here.

Wesley J. Peoples, UsAirco president, points out that this departure from steel cabinet construction will result in lighter weight, elimination of rust and corrosion, minimizing of condensation on the outside of the equipment, superior sound and thermal insulation, and freedom from the danger of scuffing or denting, with no loss in structural strength.

In addition to the Fiberglas cabinet, the new equipment will offer: heating as standard equipment, with all models featuring either reverse cycle operation or electric heat strips; an inside cabinet of unusual

(Concluded on Page 17, Column 1)

Quiet Kool Redesigns Room Coolers for '54

NEWARK, N. J.—Quiet Kool introduced a completely redesigned line of 1954 room air conditioners, consisting of 20 new models, at the 8th All-Industry Refrigeration and Air Conditioning Exposition in Cleveland. New, contemporary styling for the entire line was handled by one of the country's leading industrial designers, according to Quiet Kool.

There are two series of models available, the Compact, and the Custom.

The Compact series, which consists of the ⅓ and ½-hp. air conditioners, with the "Install It Yourself" feature, was designed to permit installation by the average owner, with elementary tools, in approximately 30 minutes. These models fit windows

(Concluded on Page 17, Column 5)

Excise Tax Lifted from Some Units

Commercial Condensing Units 'Suitable' for Household Now Tax Free

CLEVELAND—A ruling from the Commissioner of Internal Revenue has relieved from the application of the excise tax all refrigeration condensing units and compressors except hermetic motor-compressors and self-contained condensing units of the low torque, low evaporator temperature type under ¾ hp.

The ruling has been received from R. J. Popp, chief excise tax ruling branch, office of the Commission of Internal Revenue.

The tax ruling is an achievement of the cooperative efforts of the tax committee of the Air Conditioning and Refrigeration Institute and the commissioner's office, and limits the tax to those units to which it was intended to apply. The tax no longer applies to condensing units designed for air conditioning and commercial refrigeration applications, which might have been "suitable" for household or freezer cabinets.

Said the letter from the office of the Commissioner of Internal Revenue:

"The types of compressors and condensing units subject to tax under section 3405 (B) of the code, are hermetic motor-compressors and self-contained type hermetic condensing units under ¾ hp. Nominal rating, suitable for use at the evaporator temperatures used in household type refrigerators and household type quick-freeze units, and incorporating motors with low starting torque characteristics. These standards governing taxability of the units involved shall apply except where a

(Concluded on Page 17, Column 2)

Westinghouse Bows Room Cooler Line; Dehumidifier Shown

MANSFIELD, Ohio—Returning to the room air conditioner field after an 11-year absence, Westinghouse Electric Corp. introduced its new line of room air conditioners this week, exhibiting them for dealers and distributors attending the 8th All-Industry Refrigeration & Air Conditioning Exposition in Cleveland. Also introduced was the company's electric dehumidifier, model HR-4A.

Introducing the new line of window-type Westinghouse room air conditioners, H. F. Hildreth, manager of refrigeration specialties for the company's electric appliance division, said, "The highly competitive nature of the room air conditioner field today demands that any company entering the field at this time must have a superior product. We believe the new Westinghouse line more than meets this requirement in both attractiveness and advanced engineering."

There are five models in the new Westinghouse line, ranging from ½ to 1½ hp. Pushbutton comfort controls on the three deluxe models provide a choice of ten comfort zones, while dial-type controls on the two special models have six settings. All are equipped with draft-free grilles

(Concluded on Page 4, Column 1)

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RACCA Goes on Record

Contractors Protest Exemption of Auto Air Conditioning from B9 Safety Code

CHICAGO—Refrigeration and Air Conditioning Contractors Association has gone on record as protesting the exemption of automobile air conditioning and truck and freight car refrigeration from the proposed 1953 B9 Safety Code, according to Ray Kromer, executive vice president of RACCA.

A copy of the letter of protest from RACCA to the American Society of Refrigerating Engineers and the American Standards Association follows:

"The Refrigeration and Air Conditioning Contractors Association wishes to go on record as objecting to the exemption of automobile air conditioning and refrigeration equipment installed in railroad cars, trucks, and on shipboard, from the proposed 1953 revision of the B9 code, as designated in section ASA B9-1-1953.

"To further emphasize our stand in this matter, please refer to the attached copy of a Resolution recently enacted by a joint committee of the United Association and the Refrigeration and Air Conditioning Contractors Association, which fully covers the attitude of these associations resisting any attempt to withdrawal of automobile, truck, or freight car refrigeration from Local, State, or National Codes.

"Since this phase of the industry is in its infancy, it should not be difficult to provide a section in the B9 Code covering automobile air conditioning, truck, railroad car, and ship refrigeration that would protect the health and safety of the operators and passengers of such conveyances.

"The exemption at this time, in our opinion, would be a definite step backward by the industry, as such exemption would permit the use of sulphur dioxide, methyl chloride, ammonia, or any other refrigerant without control. It would establish precedent that could render valueless existing and future local and state codes and could be read into other refrigerating and air conditioning equipment.

"The Refrigeration and Air Conditioning Contractors Association suggests that a representative from the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL, and a representative from the association be included on any panel that may have authority to decide this important matter."

Kromer further states that the Joint Resolution adopted by the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL, and RACCA, dated Oct. 23, 1953, states their position in this matter.

Break Ground for New Westinghouse Plant For Air Conditioning

STAUNTON, Va.—Ground was broken recently for Westinghouse Electric Corp.'s new air conditioning plant at nearby Verona. The multi-million dollar plant is expected to be completed in June, 1954.

Harry E. Seim, Westinghouse vice president and general manager of the Air Conditioning Div., pointed to the project as tangible evidence of Westinghouse's faith in the growth of the air conditioning industry.

"This plant will increase our productive capacity for packaged air conditioners five-fold," Seim said, "and will enable us to keep pace with the growing demand for residential, commercial, and industrial air conditioning equipment."

Capacity of these packaged-type units will range from 2 tons of cooling to 15 tons. The recently announced Westinghouse air-to-air heat pump also will be produced here.

The new plant will be modern in every respect, he reported, with the safety and comfort of the employe given every possible consideration. Efficient equipment and up-to-date manufacturing methods will be used.

After completion, the plant is expected to provide employment for more than 500 local men and women, and will boost the area's annual business and industrial payroll by more than $2,000,000. Seim emphasized, however, that preliminary hiring cannot begin until the plant has been completed.

'54 Fresh'nd-Aire Room Unit Output Starts In New Factory

CHICAGO—On Oct. 29, the Fresh-'nd-Aire Co., manufacturer of room air conditioners and air treatment appliances here, began full scale production of a new and different line of 1954 Fresh'nd-Aire all-season room air conditioners.

This division of the Cory Corp. will manufacture the Fresh'nd-Aire units at its recently acquired Grayslake, Ill. plant.

According to J. W. Alsdorf, Cory president, the consuming public is in for a pleasant surprise when they see the vast change in styling and conveniences offered by the Fresh'nd-Aire line.

"Our experience in 1953," said Alsdorf, "showed conclusively that the public favors air conditioners which offer strikingly different features of styling, and that people are greatly confused by complex operating mechanisms. By careful thought and study on these two main points, we've achieved a unit which will actually hide behind flush drapes, and can be completely electromagnetically controlled by the touch of a button."

Cory Consumer Card Checks Quality of Service Work Done In Field

CHICAGO—To check the efficiency of Cory field service stations throughout the United States and to test the attitude of consumers after Cory products have been returned to such stations for field service, Cory Corp. has adopted a new procedure involving the use of a consumer questionnaire card.

Card pictures a "Sherlock Holmes" type character named "Max" who is out to get the facts about service. It is sent from the firms service department to consumers who have had products repaired in the field. Spaces on the card are left for consumers to check whether or not service was performed satisfactorily, their attitude about charges involved, and information as to how long the product was in use before service was required.

After completion, the consumer returns the card direct to the Cory service department, where information is consolidated and analyzed.

Vining Named Executive V. P. of White Products

MIDDLEVILLE, Mich.—A. D. Vining has been named executive vice president and general manager of White Products Corp., manufacturer of gas and electric water heaters, it was announced recently.

Vining has been associated with the company since 1948, first as sales manager, then as vice president and general manager. He was formerly assistant sales manager at Gibson Refrigerator Co.

Beer Cooler Not So Hot As Safety Deposit Box

DAVENPORT, Iowa—Hiding money in their beer cooler wasn't such a hot idea, the operators of John and Flo's tavern here have decided.

Burglars recently broke into the tavern, removed the hinges from the cooler, and made off with $150 hidden in the box.

Fair Trade Council To Hear 8 Authorities In New York on Nov. 17

GARY, Ind.—A list of eight outstanding authorities on fair trade will speak Nov. 17, in New York City, at American Fair Trade Council's annual Open Forum, John W. Anderson, president of the council, announced. The council will meet at the Roosevelt hotel.

Meeting starts at 12:30 p.m. with a fair trade luncheon of the Sales Executives Club of New York. The luncheon will feature talks on fair trade enforcement by Robert C. Walton, manager of General Electric Co.'s fair trade section, and Justice Henry Clay Greenberg of the New York Supreme Court.

Thomas Kiernan, New York lawyer, will be moderator for the Open Forum which will follow at 2:00 p.m., to be addressed by six other distinguished speakers. John Minor Wisdom, who speaks in the courts for John Schwegmann, will be included.

Fair trade enforcement will be discussed by Samuel Fingrutd, Philadelphia wholesaler, who will outline and discuss his plan for a nationwide network of lawyers to aid in fair trade enforcement.

Other speakers will be George M. Chapman, Lewis G. Bernstein, and Breck P. McAllister, all New York City attorneys. Each will discuss a special phase of fair trade.

Following the addresses, the eight speakers will join with the council's board of directors, to form a panel to discuss questions from the audience.

With Mercury at 4° Above Alaskan Wires U. S. For Room Cooler

CHICAGO—Will wonders never cease?

Clarence Tay, general manager of branches for Admiral Corp., expressed that thought upon receiving this telegram from their representative in Anchorage, Alaska:

SHIP VIA AIR FREIGHT IMMEDIATELY ONE-TON AIR CONDITIONER. CUSTOMER WILL PAY CHARGES.

The day's low temperature at Anchorage, according to the U. S. Weather Bureau, was 4 above zero. All a fellow had to do to cool off was to open a window. Nevertheless, the unit is on its way to Alaska aboard a Flying Tigers line plane. The shipping charges: about $70.00.

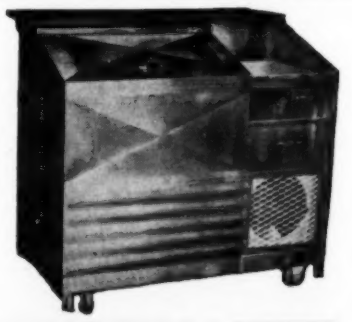
refrigerator hardware

standard and custom-built by

NATIONAL LOCK

shelf supports
screws and bolts
butts and hinges
stove hardware
handles

National Lock Company
ROCKFORD, ILLINOIS
REFRIGERATOR HARDWARE DIVISION
Write us for full information and design details



DRINKMASTER
PORTABLE — REFRIGERATED
Stainless Steel HOMEBAR
PLASTIC CHARTREUSE FRONT
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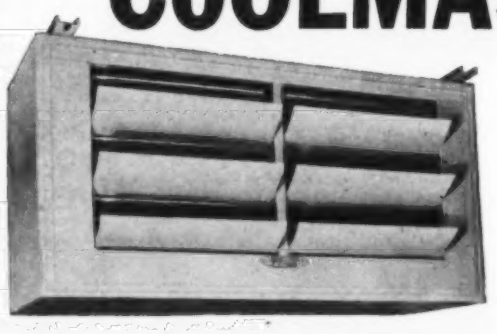


by KRAMER

The product cooler with an enviable record of fine performance. Available in five sizes, ranging from 10,000 to 60,000 BTU's.

Write for Catalog R-225

KRAMER TRENTON CO. • Trenton 5, N.J.

Astral Industries Plans Stock Sale To Pay Debts

NEWARK, N. J.—Astral Industries, Inc., manufacturer of the bantam size Astral refrigerator, has passed into receivership with Harold S. Okin, Ridgewood, N. J. attorney, named as receiver.

As of Sept. 30, the company was reported to have liabilities of $1,227,608 and assets of $744,026.

The company plans to pay its creditors from sale of authorized but as yet unissued shares of stock. It intends to pay in full wage claims, taxes, and creditors of less than $50. Other creditors will be paid on a pro-rated basis from the remaining proceeds from the stock sale. This will be in full payment for their claims.

An unofficial creditors' committee headed by Roger A. Brown of Calkin and Holden, New York City, has expressed willingness to go along with this plan. Sanford Silverman, Newark attorney, was named attorney for the committee. A. J. Kravetz of Mobile A. Service Organization of Jersey City is committee secretary.

It was pointed out that the number of shares to be sold will constitute a controlling interest in the country.

Astral Equipment, Ltd., a United Kingdom corporation, is the sole stockholder in Astral Industries and its largest creditor. It has an unsecured claim for goods sold and delivered of $719,550.

G-E Pushes Refrigerators With Skip-Payment Plan, Ice and Hot Food Server

LOUISVILLE, Ky. — A double-feature promotion for refrigerators—a skip-payment plan and an ice bucket-hot food server gift—will be used by many General Electric major appliance dealers during the holiday season.

Through a special arrangement with General Electric Credit Corp., dealers will be able to offer a 90-day holiday from payments, after a small down payment, to customers who buy G-E refrigerators between Nov. 24 and Dec. 24, according to J. J. Slattery, marketing manager for the household refrigerator department. Thus, the first installment payment will not be due until 90 days after the purchase.

The silverplated ice and hot food servers are being made available to dealers through their distributors at nominal cost for their use as gifts to refrigerator purchasers.

The server, which has a capacity of nearly three quarts, is made of heavy silver plate over copper with a polystyrene vacuum-sealing inner liner. It is designed to keep ice cubes up to 18 hours and to serve food hot for two to four hours.

JUST ASK US!
Turn to "What's New" Page for useful information on new products.

Chicago Electric Assn. Sponsors Christmas Club To Spur Range Sales

CHICAGO—To further accelerate the current campaign to sell electric ranges in Chicago, the Electric Association has announced details of a "Santa's Christmas Savings Club" promotion for dealer salesmen.

Sponsored by the Electric Cooking Institute, the promotion became effective Nov. 1. Closing date is Dec. 15.

According to club rules, cash payoffs of "savings" registered in a special "bank book" will be made on the following basis: $5 for each electric range sale up to the quota based on last year's performance; if sales exceed quota, bonus money will be doubled on all range sales, or $10 for each range sold during the promotion.

Other club rules provide that:

1. Only electric ranges sold and installed in the city of Chicago will qualify for pay-offs.

2. Only electric ranges sold and installed in single family dwellings, or buildings of six apartments or less, will qualify.

3. In order to collect Christmas savings, dealer must notify his Edison dealer advisor of all ranges sold and installed in Chicago during the period Nov. 1 to Dec. 15.

4. No range sales will be eligible for pay-off unless registered and approved by the Edison dealer advisor.

5. No sales will be eligible for pay-off after 11 a.m., Dec. 16, 1953.

Houston Dealers Act on Phone Directory Listings

HOUSTON, Texas—"The problems of multiple listings in classified business phone directories must be cleared up immediately," declared Stanley Blount, president of the Houston Appliance Dealers Association, "or appliance dealers are going to find themselves spending far more than the budget allows in a vain effort to get advertisement representation in each of the categories wherein their listings might appear."

Blount, president of Stanley's Appliance Center in Houston, outlined the steps that his association is taking in an effort to correct the situation existent in his area.

Letters have been sent to individual dealers, as well as interested associations including the Better Business Bureau, Chamber of Commerce, etc., enlisting their aid.

Along with the letter a listing of categories which should be added, another listing of categories to be deleted, and very specific layout recommendations for trademark advertising was sent to each interested person, and a petition for circulation, with signatures to come from all allied organizations and all possible dealers.

"The circulation of these petitions is the final step in a long and carefully planned campaign to end this problem once and for all," Blount stated. "It is our hope that, through this means, we can effect mutual agreements with the publishers of the phone book that will make it possible for appliance dealers to get real use and reader traffic."

More Fair-Traded Appliances, Stricter Enforcement Practices May Be Due

NEW YORK CITY—A poll of 25 trade groups by the Bureau of Education on Fair Trade has turned up predictions that stricter enforcement of fair trade is in the offing and that more products will be fair-traded.

The poll was taken to sound out business associations on the effect of the U. S. Supreme Court's recent refusal to review a decision by the Louisiana District Court upholding fair trade.

A. W. Bernsohn, managing director of the National Appliance & Radio-TV Dealers Association, said the decision would result in greater emphasis on brands in the industry. He said he also believes a greater number of major appliance and television lines might be fair-traded.

Russell R. Mueller, managing director of the National Retail Hardware Association, expressed the view that the high court's action "will now permit manufacturers and wholesalers to really develop fair trade programs, particularly by curbing fake discount houses and fake wholesale operations."

Jerry Johnson, president of the National Retail Grocers Secretary Association, said it is obvious that manufacturers are prepared to take vigorous action to enforce fair trade.

Sidney Singer of the National Jewelers Association declared that manufacturers and wholesalers must enforce fair trade and abandon the "double standard."

The Supreme Court's decision will increase vigilance by manufacturers, wholesalers, and retailers, in the opinion of R. H. Rowe, vice president and secretary of the United States Wholesale Grocers' Association.

W. W. Marsh, executive secretary of the National Association of Independent Tire Dealers, predicted that many will jump on the fair-trade bandwagon "if fair trade is as sucessful a I believe it will be."

W. D. Jenkins, president of the National Electronic Distributors Association, asserted that fair trade is the only way to protect branded merchandise. And Paul H. Bolton, executive vice president of the National Association of Wholesalers, said that wholesalers "will most certainly" push fair-traded goods.

The action of the Supreme Court gives manufacturers an opportunity to fulfill pledges to customers, according to George J. Burger, vice president of the National Federation of Independent Business.

Town In N. Y. Adopts Death Trap Ordinance

GLEN FALLS, N. Y.—This city has joined the growing list of communities that have adopted laws designed to curb the abandoned refrigerator menace.

A new ordinance provides for a maximum penalty of one year in prison and/or $500 fine for persons who abandon ice boxes or refrigerators accessible to children without locking doors or removing hinges.

Acceptance in the field is rapidly changing to "Demand" for these efficient, more economical Cleanable water-cooled Condensers. Owners and service men prefer the "new unit" efficiency that can always be maintained by a simple cleaning process. Brass headers, machined and brazed.

Write for Catalog and Prices

WHOLESALERS IN PRINCIPAL CITIES

Halstead & Mitchell

BESSEMER BLDG. PITTSBURGH 22, PA.

"When I learned that

ALUMINUM FREEZES FASTER

...that sold me!"

People have become *aluminum* conscious . . . and, more and more leading manufacturers are using *aluminum* parts in their refrigeration units. They know that ice trays, evaporators and other refrigeration parts . . . all made from *aluminum* . . . offer extra sales appeal.

Close the sale with these aluminum features:

FASTER FREEZING plus greater defrosting efficiency.

RUST PROOF parts for more years of trouble-free service.

LIGHT WEIGHT easy-to-clean shelves for unusual convenience.

NON-TOXIC qualities provide greater food protection.

BOHN

ALUMINUM AND BRASS CORPORATION

1400 LAFAYETTE BLDG.
DETROIT 26, MICHIGAN

Sales Offices In All Major Cities

EQUIPPED with casters for easy portability, the 1954 Westinghouse dehumidifier, model HR-4A, can be used to remove moisture from room or used as a supplemental space heater. Compactly built, the new dehumidifier removes up to three gallons of water from the room air every day.

Westinghouse Room Coolers, Dehumidifer--

(Concluded from Page 1, Column 5)

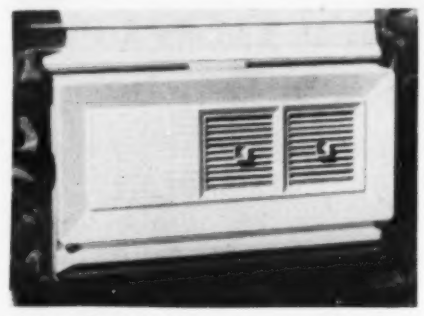
that are individually adjustable to direct the flow of conditioned air up, down, left, right, or combinations of directions. To give year-round use, heating elements are built into the ¾ and 1-hp. deluxe models, and thermostats are standard equipment on all deluxe models.

With a smooth, sleek outside appearance to harmonize with contemporary furniture, all models in the Westinghouse room air conditioner line boast of concealed controls that are easily accessible at a no-stoop level beneath the cabinet lid. Color used in all cabinets is two-tone rose beige, according to the firm.

Heading the Westinghouse 1954 Room Air Conditioner line is the 1½-hp. deluxe model, AW-150D, which carries a suggested retail price of $594.95.

Pushbutton controls provide six comfort conditions. A built-in thermostat provides automatic regulation.

Zones for cool and dehumidify conditions include "full cool" setting for removing up to 30 quarts of moisture from the room air every day; "cool and ventilate" to bring in outside air which has been filtered, dehumidified and cooled; and "cool and exhaust" to pump out stale, smoky air, and at the same time maintain a dry, cool comfort zone.



WESTINGHOUSE ½-hp. room cooler offers six comfort zones.

Ventilating comfort control settings provide: "fresh air" to bring in filtered air and no-draft room ventilation; "stale air out" to expel stale, smoky air, and cooking odors; and "circulate" to provide constant circulation and filtering.

Four grilles can be individually adjusted to direct the flow of conditioned air up, down, right, or left, as desired.

The AW-150D model will cool a room with a floor area up to 850 sq. ft. The blower and fan motor is powered with a two-speed, ⅓-hp. shaded pole motor.

Two other deluxe models, the 1-hp. model AW-100D at $449.95 and the ¾-hp. model AW-75D at $399.95 were introduced.

Both models feature pushbutton controls with a choice of ten comfort zones. To give year-round use, heating elements are built into these models, and thermostats for automatic regulation are standard equipment.

Grilles on both room air conditioners can be adjusted to direct the air flow in four directions for controlled circulation in all parts of the room. The cabinets are 15⅜ in. high, 26¼ in. wide, and extend only 10½ in. into the room from the face of the window.

The 1-hp. deluxe model is designed for rooms with a floor area up to 600 sq. ft. It will circulate up to 375 cu. ft. of room air per minute, remove up to 36 quarts of water from the room air every 24 hours, provide up to 150 c.f.m. of fresh outside air, and exhaust stale air up to 175 c.f.m.

It has a high-speed, 2,000-watt heating element and the blower and fan motor is a two-speed, ⅙-hp. shaded pole motor.

The ¾-hp. deluxe model circulates up to 300 cu. ft. of room air per minute for rooms up to 500 sq. ft., removes up to 30 quarts of water from the room air every 24 hours, provides up to 100 c.f.m. of fresh outside air, and exhausts stale air up to 150 c.f.m. It has a 1300-watt heating element and the blower and fan motor is a two-speed ⅒-hp. shaded pole motor.

Two smartly styled special room air conditioners, the ¾-hp. model AW-75 at $369.95 and the ½-hp. model AW-50 at $319.95, bring complete room air conditioning with economy.

DIAL TYPE CONTROLS

Dial-type control panels on each model offer a choice of six comfort zones ranging from "full cool" setting for removing moisture from the room air to "stale air out" setting to expel stale, smoky air, and cooking odors. Thermostat controls for automatic regulation are available as accessories.

Model AW-75 provides complete comfort cooling in rooms with a floor area up to 430 sq. ft. It circulates up to 300 cu. ft. of room air per minute, removes up to 30 quarts of water from the room air every 24 hours, provides up to 100 c.f.m. of fresh air, and exhausts stale air up to 150 c.f.m.

The cabinet is 15⅜ in. high, 26¼ in. wide, and extends only 10½ in. into the room from the face of the window.

Model AW-50 brings comfort cooling in rooms with a floor area up to 340 sq. ft. It circulates up to 200 cu. ft. of room air per minute, removes up to 21 quarts of water from the room air every 24 hours, provides up to 80 c.f.m. of fresh air and exhausts stale air up to 90 c.f.m. The cabinet is 13⁷⁄₁₆ in. high, 22¾ in. wide, and extends only 9½ in. into the room from the face of the window.

The new dehumidifier will remove as much as three gallons of water from 10,000 cu. ft. of space every 24 hours, it was reported by H. F. Hildreth, manager of the Division's refrigeration specialties department located at East Springfield, Mass.

HEATING ELEMENT

A new 1325-watt heating element is used with the dehumidifier blower to drive heat into the room and permits the new model to serve as a supplemental space heater in mild climate areas or on cool days at the beginning or end of the regular heating season.

Compactly built, the new model is styled in a brown-beige color.

The present model H-4 dehumidifier will be continued in 1954. This model has identical features of the deluxe dehumidifier except for the heating element. The model HR-4A carries a suggested retail price of $159.95 while the model H-4 will continue to carry the suggested retail price of $139.95.

CARTI-AIRE room cooler is constructed in two sections. Window section weighs only 20 lbs.

Portable Room Cooler--

(Concluded from Page 1, Column 2)

units in ½ and ¾-ton sizes in time for the 1954 selling season will get under way immediately. Shipments will begin in January or February, with samples available in a few weeks.

"This portable air conditioning unit is constructed in two sections, one for the window and the other for the floor," the company explained. "It does not extend beyond the building line and will fit any type of window, including casement.

"Weighing 20 lbs., the window section may be moved from room to room or even from house to house and be installed easily by a housewife with minimum of tools and work. The botton section is on casters for easy mobility. The unit can be used in one room during the day and another room at night.

"The Carti-Aire is claimed to operate with "greater efficiency due to a new circulation principle." In addition, there is no condensation drip, the company said.

Another major advantage cited is "quieter" operation "due to the separation of the units and better insulation created by the unit setting on the floor rather than on the sill."

The window section is equipped with Plexi-glass "wings" which slide out to seal the installation to the sides of the window frame. The top of the section is grooved to make the lowered window fit tightly.

The window section contains the condenser and fan while the lower section, on casters, stays on the floor of the room and contains the evaporator, compressor, water pump, filters, etc.

Both sections are joined by a specially designed flexible hose, 6 ft. long. The hose serves as a conductor for the refrigerant, and for the water from the pump to the condenser.

Based on several basic patents, the Carti-Aire is fully protected in all respects, the company noted.

According to Albert Klinghoffer, president of Jay Broiler and an officer of New-Aire, list prices of the unit, although not yet determined, will be competitive.

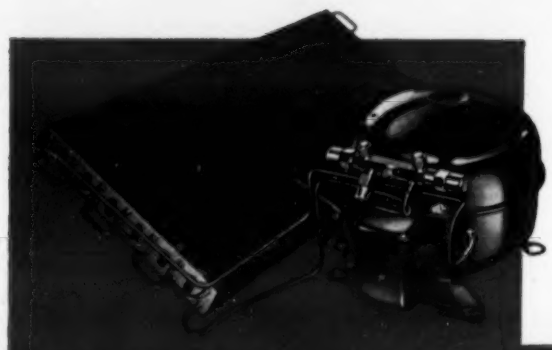
At the same time, a separate division will be set up to handle multiple installation sales to hotels, motels, etc. Several distributor appointments have already been made but most of the territories are still open.

Other officers of New-Aire Corp. are Leon Klinghoffer, I. Jay, and Arthur O. Bregstein.

14 Million

Tecumseh

COMPRESSORS SHOULD MEAN $$ TO YOU . . .

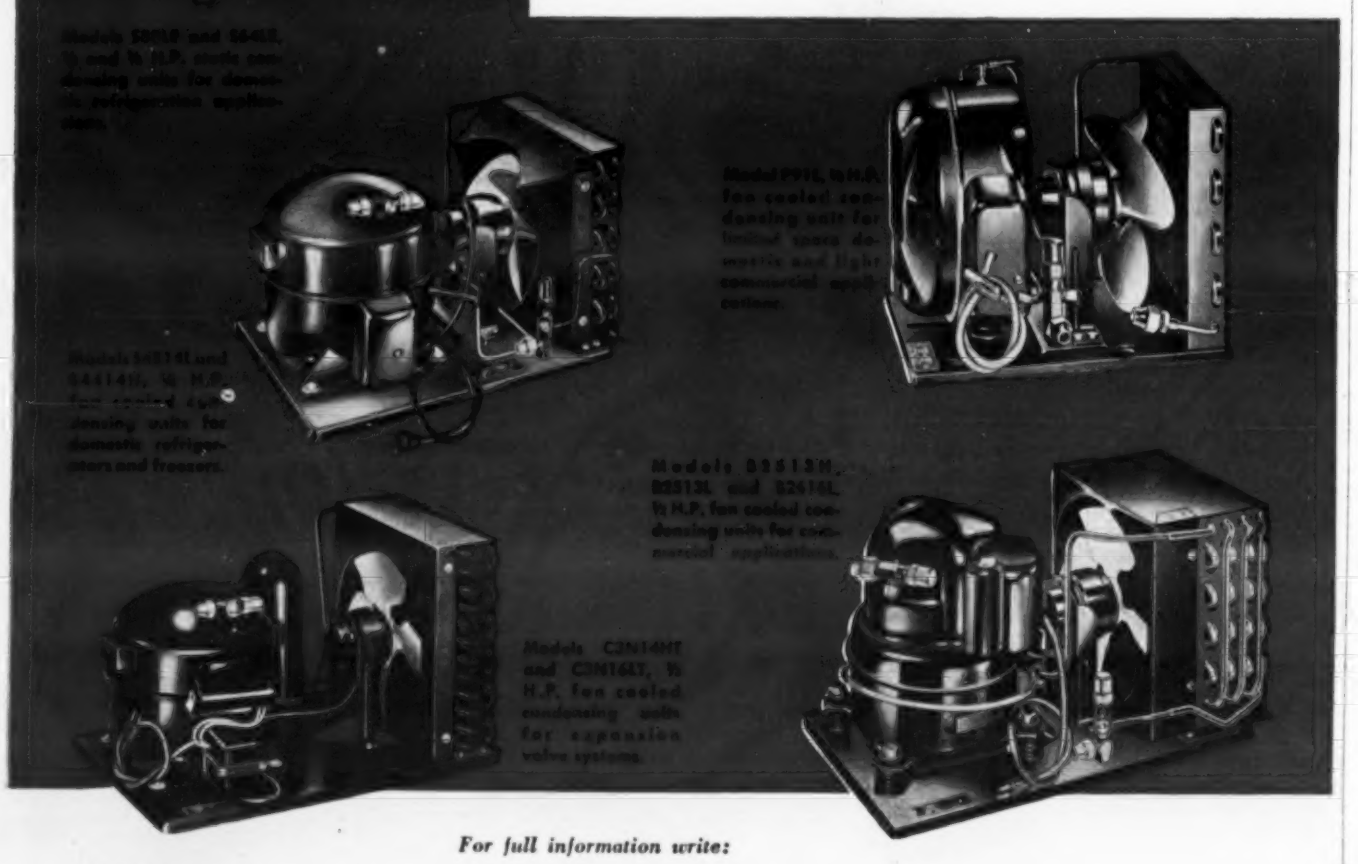


AND HERE'S WHY: The 14 million Tecumseh compressors now in the field represent a really big replacement market for you. Since Tecumseh is now building better than 3 million compressors per year this market is growing rapidly. Standard replacement hermetics for all types of applications are available for most units now in the field whether the original compressor was supplied by Tecumseh or not.

When you use Tecumseh hermetic replacements you get maximum customer satisfaction with a minimum of installation time. You are assured of having the right compressor for the application and know the replacement unit will fit the cabinet.

Your savings in time, the benefits of customer satisfaction and the profit on the sale add up to more dollars in your cash register when you buy Tecumseh.

See your Tecumseh Selective Wholesaler for all your refrigeration requirements—there's one located near you.


Models S9H9 and S9413L, ½ and ⅓ H.P. single condensing units for domestic refrigeration applications.
Model P91L, ⅓ H.P. fan cooled condensing unit for limited space domestic and light commercial applications.
Models S4514L and S4414H, ¼ H.P. fan cooled condensing units for domestic refrigerators and freezers.
Models B2513H, B2513L and B2618L, ½ H.P. fan cooled condensing units for commercial applications.
Models C3N14HT and C3N16LT, ½ H.P. fan cooled condensing units for expansion valve systems.

For full information write:

TECUMSEH PRODUCTS Company
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The world's largest producer of condensing units for the refrigeration industry.

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Available in a complete range of sizes—including larger models for use in Commercial and Semi-Commercial Compressors, like those listed below. *23 years performance proof!*

BAKER • BRUNNER • CARRIER
COLDSPOT • COPELAND • CURTIS
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THE mechanical seals for ROTARY SEAL COMPANY rotating shafts

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INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

the country who entered the company's "Pick the Pros" contest.

In addition to local entries, armchair quarterbacks sent in predictions from 41 states, the District of Columbia, and as far away as England and Hawaii.

The lucky Swami who names the finishing order correctly in both leagues will receive a 21-inch Westinghouse television console.

Puns Unlimited

Not so long ago DOPE had fun with speculations about imaginary names for city and small-town newspapers. Bill Saph has outdone us. Quote:

Dear Taubeneck:

This Tues. a.m. I piled out of the "MURPHY Bed" and yodelled in a fine "ALTO Voice" while making my way to the kitchen. But, I got to thinking as I tried to decide between "HAMMOND Eggs" and a "HAMBURG Steak.". Here it is near the "HOLLY Daze," says my conscience and you didn't even have a "KINDE Word" for Old Taubeneck. Suppose you think you're a "WISE Guy"—did you ever think it must be "PURDY Awful" to be in the spot he's in? Why I'll bet that there's a "SAGINAW Floor" where his desk sets with all the letters he received!

I couldn't eat, so I went in and sat down in the "MORRICE Chair," hooked my heels over the "BANNISTER Rail," and tried to think. "You should be behind "YALE Bars," says my conscience the minute I'm settled. Before he catches a "PULLMAN Car" out of town, why don't you apologize for that first letter? You really hit "ROCK Bottom" on that! Why don't you just send him a list of stinkers like he asked for? "WILLIS Dew," I remarks to said conscience.

"CLIO Patter"
"RIGA Mortis"
"ATHENS Insight"
"AUGUSTA Wind"
"COLLING Allcars"
"TWINING Vine"
"STEUBEN Toe"
"PARIS Garter"
"CARPENTER Level"

"HALE Know," said my conscience, you're hopeless! I'm packing my "GLADSTONE Bag" and leaving with Taubeneck. Watch the "FLINT Lock" when you close the door, said I, and he was gone.

Yours.
BILL SAPH

Lowdown on Conventions

Leave us assume that national executives earn an average income of $18,000 a year. That would be about $350 a week or $8.75 per hour for a 40-hour week, which is the ostensibly accepted work week (not counting home work or extra-curricular business or social contact time).

Next, let's assume that the average convention gathers an attendance of 300 people. Judging by those flying figures it costs an American partnership or corporation $2,625 per hour for its executives to sit through a convention.

Advertising convention speeches—like those of most other business meetings—leave an enormous amount to be desired. Too many of them are devoted to subjects or techniques that the audience learned long ago. Too many are dull, uninspired, pollyannic, or just not worth doing.

THESE FRUSTRATIONS AREN'T NECESSARY speeches can be useful, exciting, stimulating, controversial.

People can, and should, come away from conventions enthused and equipped to do better jobs.

A convention is one of the great institutions of American Business. It can be improved—if the sponsors have the wisdom and courage to provide speakers and speeches who can reveal real, basic issues which businessmen have to face.

The success of this little Bally Servicold 60 case started something

and here it is!

A LARGER SIZE SALES-MAKING SELF-SERVICE CASE

BALLY SERVICOLD 96

96" LONG
35½" DEEP
56¼" HIGH
DISPLAY AREA
24.4 sq. ft.
STORAGE AREA
16 cu. ft.

SERVICOLD 96 IS AVAILABLE TO FRANCHISE DEALERS OF OTHER LINES IN TERRITORIES WHERE BALLY IS NOT BEING SOLD.

This is the case your customers have asked for!

- √ It's open style . . . easy self-service for the small store . . . just what they need for dairy products, fruits and vegetables, meats, delicatessen, candy and baked goods. Finish is genuine Bally acid-resistant porcelain for lifetime service . . . never turns yellow or peels.
- √ Displays plenty of merchandise . . . in addition to the roomy main shelf there is an ample sized refrigerated mezzanine shelf for extra display. Complete display is doubled in appeal by the lifetime copper-back mirror angled to catch the eye.
- √ Large refrigerated compartment . . . located in lower section of the case provides perfect storage space to keep extra supplies of all types of perishable foods.
- √ It's easy to install...only 35½" deep to go through narrow doors of small stores. No expensive remodeling needed to locate it in minimum floor space.
- √ No compressor worries . . . powerful ¾ horsepower noise-free hermetic compressor with capillary tube built in (5 yr. warranty). Compressor is special type with 110 volt current that eliminates the need of special power wiring in your store.

Here's Why We Know You Will Make More Sales With This Open Case

The outstanding job being done with the original little Bally Servicold 60 by dealers across the country has forced us to "grow-into" a new market . . . it's a good one and a profitable one for you.

Stores with more floor space are demanding Bally Servicold in a *larger size.* They recognize that the basic design of Servicold is what they want and need. They know that this self-contained, double-duty, two-shelf, all-purpose case will do more business for them.

We know it will do more business for you, too. So, that's why we are now producing the new Bally Servicold 96 as a companion to Servicold 60.

You start selling Bally Servicold 96 with a ready-made market . . . you start with a recognized need . . . a case that has been pre-sold to merchants.

Your customers are waiting for this case, in Delicatessens, Meat Markets, Grocery Stores, Dairies, Confectioneries, Drug Stores, Florist Shops. Get in touch with us today so you can start telling . . . start selling.

list price
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Bally Case and Cooler Company
Bally, Pa. (Dept. A)

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COMPANY.....
ADDRESS.....
CITY..... STATE.....

'Fastest Growing Home Appliance'

Mitchell Predicts Room Air Conditioner Sales Will Soar to 1,500,000 Units In '54

CHICAGO—Room air conditioner sales will soar to 1,500,000 units in 1954, Bernard A. Mitchell, president of the Mitchell Mfg. Co., predicted recently.

Mitchell said that next year's sales will almost equal those of the entire eight years since the room air conditioner industry went into volume production after World War II.

He revealed these beliefs at a company sales meeting at the Edgewater Beach hotel, Chicago.

Mitchell's prediction was based on a statistical study compiled by his company using industry and utility company tabulations.

The study shows that room air conditioners are not only the fastest growing sales item in the home appliance field, but that in terms of the potential sales market, no other major home appliance is even close.

The study also indicated that 800,000 conditioners were sold this year alone as compared with only 1,000,000 units in the preceeding seven year period.

Mitchell pointed out that this surprising increase in volume of sales for 1953 was not reflected in other home appliance sales. Refrigerators and freezers actually dropped 10% and television showed only a 10% increase as compared with the 134% increase of air conditioners.

"There is no reason why this boom in sales should not continue for a long time," Mitchell said. "Only 3.4% of our potential market has been reached while over 91% of the people who can use refrigerators already have them, and 63% of potential television buyers already own sets."

Although climate plays a part in the sale of air conditioners, comparative figures from a northern and southern city — Philadelphia and Houston — show that air conditioners are selling well in both places.

In Philadelphia they have risen to third place, surpassed only by television and refrigerators in unit sales, and in Houston they have passed the sale of refrigerators.

Mitchell said homes and apartments account for 76% of all room air conditioner sales with the rest going to offices, factories, hotels, and motels. The most popular place for them in homes is the bedroom.

The most often called for size is the ¾-hp. unit with the ½-hp. unit next in popularity.

The summer months—June, July, and August—show the highest volume of sales with November through February showing a marked decrease. However, the addition of a heating element developed last year by the Mitchell company has kept sales from being entirely seasonal, Mitchell said.

Most of the sales of air conditioners are made through appliance dealers, department stores, hardware stores, and furniture outlets.

G-E To Produce '54 Room Coolers In Erie

LOUISVILLE, Ky.—The 1954 line of room air conditioners recently announced by General Electric will be produced at the Erie, Pa., works of the company, states Harold B. Donley, general manager of the specialty refrigeration products department.

Transfer of manufacture of the room air conditioners to Erie from the Bloomfield, N. J., air conditioning works of the company will enable increased production of the units, Donley said. Room air conditioners eventually will be manufactured at the major appliance division's new Appliance Park now under construction at Louisville, Ky. Refrigerators and home food freezers are also being produced at the Erie works pending completion of Appliance Park facilities.

Hotpoint Goes National

A 1½-HP. WINDOW-TYPE ROOM AIR CONDITIONER is part of a new complete line of Hotpoint room coolers recently introduced to distributors. Hotpoint limited the marketing of room coolers to certain areas this year, but will merchandise them on a national scale in 1954.

Remington Exports 100 Room Coolers to Brazil For a Single Order

AUBURN, N. Y. — The largest single shipment of room air conditioners exported to Brazil this year by any air conditioner manufacturer was shipped recently by Remington Corp. from New York City, it was announced here by Carlos Mercado, Remington export manager.

The shipment, 100 ¾-ton window units, went aboard the Moore-McCormack liner MORMACSTAR bound for Sao Paulo, Brazil. Ordered by Cassio Muniz, a Sao Paulo appliance distributor, the units will be sold there to the general public.

According to U. S. Department of Commerce figures, only 181 window-type room air conditioners have been shipped to Brazil from January through June of 1953, and fewer than 200 during all of 1952.

"Most of these were taken in as personal baggage," said Mercado. He went on to point out that due to the scarcity of dollar exchange, it has been almost impossible to export any commodity to Brazil unless it is considered absolutely essential to the well-being of that South American Republic.

Asked to explain the success of Remington in securing the order, Mercado stated, "Up until now air conditioning has been considered a luxury in Brazil. Remington, however, has always stressed the health values and other benefits of room air conditioning in addition to cooling. It is my belief that this emphasis on health was one of the most important factors in obtaining the import permits necessary for such a sizeable shipment."

"Due to its climate," Mr. Mercado continued, "Brazil is an exceptionally large potential market for Remington's export program, which currently includes shipments to more than 57 countries throughout the world."

Doctor Raps Statement That Cool Air Invites Stomach Upsets, Colds

TULARE, Calif.—A local doctor has challenged the statement in a recent issue of *Town Journal* that keeping the temperature in air conditioned areas more than 10° below outside heat "invites stomach upsets, colds, and sore throats."

In a letter to the publication, Dr. T. E. Bartholomew declared:

"Having lived in Imperial Valley for 20 years, where temperatures are often 118-122°, I can't imagine 'cooling' a building down to (only) 108°. Why buy a conditioner in the first place? Our home was never more than 80°, usually 76-78°, as are most hotels and hospitals in the area.

"Having headed a clinic with over 33,000 patients, I do not recall seeing a single case of 'stomach upset' due to a cooling system, also very few colds or sore throats during the hot months when coolers were used.

"In over 2,000 operations involving a general anesthetic, we never had one single case of post-operative pneumonia and our operating room was kept at 78°."

Miles, Nagel & King Named Viking Chicago Representative

CLEVELAND — Frank Gibbons, sales manager, The Viking Air Conditioning Corp. here, announces the appointment of Miles, Nagel & King of Chicago as sales representative.

Miles, Nagel & King will specialize in the promotion and sale of Viking's new model window and attic fans as well as the new ¾-ton Viking room air conditioner in a six-state area: Illinois, Indiana, Michigan, Minnesota, and North and South Dakota.

William (Bill) Nagel, operating partner, was sales manager with both Hotpoint and Kelvinator, and a vice president of Globe American Stove.

SPECIFY
SPORLAN
LMC
and get
PEAK PERFORMANCE
on all Flooded Systems
with the
Sporlan
LMC
LEVEL MASTER CONTROL

Buy Sporlan Right Down the Line

Again Sporlan offers you a NEW FIRST!...

A Positive Liquid Level Control for Ammonia, Freon-12, and Freon-22 with all these features!

First, the Sporlan LMC consists of a standard Sporlan Thermostatic Expansion Valve equipped with a matched Sporlan Level Master Element. That means that the liquid level control and the expansion device are combined into one unit, and you have a choice of Sporlan Thermostatic Expansion Valves for Freon-12 and Ammonia up to 100 tons, and for Freon-22 up to 180 tons... *thus no job is too large or small for the Sporlan* LMC. *Existing flooded systems can be easily and economically modernized and made automatic with the Sporlan* LMC. *The Sporlan* LMC *provides a* MODULATED FLOW *and maintains practically a static liquid level in the low side! The Sporlan* LMC *insert bulb has* NO MOVING PARTS!

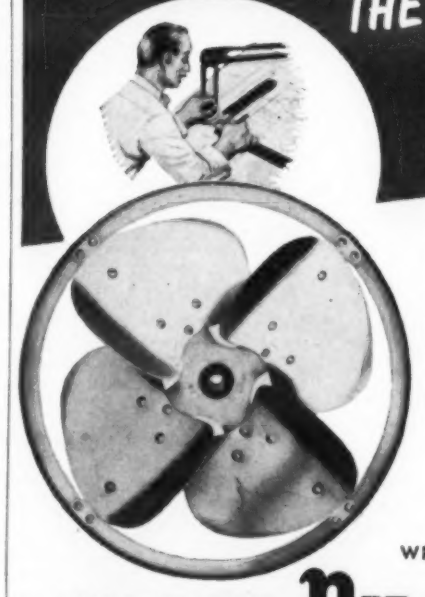
Any two wire power supply of 115 or 230 volts, any frequency AC or DC, is adequate. The Sporlan LMC insert bulb can be installed in either a horizontal, vertical or angle position for direct contact with the refrigerant. If the liquid level drops, a heater element in the bulb acts as an artificial superheat increasing the pressure in the thermostatic element, thereby opening the valve. If the liquid level rises, its refrigerating effect on the bulb overcomes the heater, and the valve throttles.

The Sporlan LMC *is* NOT *affected by turbulance... tight closing* IS *assured... there is no current flow through refrigerant... and only proven thermostatic expansion valve performance is employed!*

WRITE TODAY FOR COPY OF BULLETIN 60-15...
THEN SPECIFY SPORLAN LMC FOR ALL YOUR FLOODED JOBS!

SPORLAN VALVE COMPANY
7525 SUSSEX AVE. ST. LOUIS 17, MO.
EXPORT DEPARTMENT, 89 BROAD ST., NEW YORK 4, NEW YORK

THE "RIGHT" PROPELLER IS VITAL TO YOUR PRODUCT



The application of the "Right" propeller can make the difference between a successful product and one that does not come up to the high standards of performance required in today's selling. Meier Nu-Air "Quiet" Propellers, in both evaporator and condenser blades with a "slinger" ring can give you maximum air movement with minimum H. P. yet with a *low noise level.*

Many manufacturers, outstanding for their products, specify Meier Nu-Air props. Complete engineering services available to aid you in new design work, modification of existing designs or any application problem.

WRITE TODAY FOR MORE INFORMATION ON
MEIER Nu-air PROPS
TRADE MARK REGISTERED
MANUFACTURERS
Famed for Dependability EST 1904 Throughout the World
MEIER ELECTRIC & MACHINE CO., INC.
3525 EAST WASHINGTON STREET • INDIANAPOLIS 7 INDIANA

AIR CONDITIONING (Year-Round Residential)

NAHB's 'Research Village'

12 Homes Built to Varying Specifications Will Test Air Conditioning Cost, Operation

(Concluded from Page 1)

has been done in various schools. Thus far no extensive field tests have been conducted on air conditioned homes using all the new techniques and products which have been suggested."

Cole had proposed that the research village be built in Austin under the sponsorship of the Austin Home Builders Association and the Texas Home Builders Association in cooperation with the Bureau of Engineering Research at the University of Texas "to secure the information now lacking concerning the design of air conditioned houses, the installation of various types of equipment, the reaction of the public, especially the people living in the project and their friends."

In this project Cole is asking manufacturers to:

Furnish engineering assistance in the design of the houses and the system free of charge to the builder;

Furnish necessary air conditioning equipment to the builder on a cost basis;

Prorate cost of research to be done by the University of Texas and each participant pay a share.

Austin builders will in turn, he said, furnish the land and build the houses on a "we hope to break even" basis; sell the houses with the understanding that one or two years of research will be conducted, and work with local and national officials and publications to sell air conditioning.

NAHB's suggestions for the individual houses are as follows:

House No. 1, which should be the "best possible design for cooling," should have:

Smooth white roof (asbestos shingles or small white marble chips on roof); well ventilated attic; 6 in. of insulation over ceiling; all windows fully glazed and fully shaded; 3-in. wall insulation or equivalent; vapor barrier around entire house envelope; exhaust fan in kitchen, small one in bath; clothes dryer vented; all other recommendations of August *House & Home* story to be followed.

"This house in 100° Austin will have a heat load of approximately 14,000 to 15,000 B.t.u. per hour. The tests should prove that the best design for cooling will permit the use of 1.2-ton unit per 1,000 sq. ft. in 100° cities, a 1-ton unit in 95° cities. Will also give accurate operating cost data."

House No. 2 will be "similar in good design to No. 1 but with a larger cooling unit, say 1½ tons per 1,000 sq. ft. However, this bigger unit will not be operated around the clock during a heat wave and the owner will not take advantage of storage action. Test results should show how much more it costs to operate a bigger unit (at greater first cost, too) when compared with operating costs for" House No. 1.

"At the same time this house might have a different type of roof than the one on House No. 1. For instance, if No. 1 had marble chip roof, this one could have an asbestos roof. By recording actual roof temperatures in both houses you would determine which roof does a better job, or whether there is little to choose between these two kinds of roofs."

House No. 3 would have less insulation, perhaps 2 to 3 in. over the ceiling and 2 in. in the walls and a dark color roof. An attic exhaust fan will pull air in at one gable end and blow it out the other.

"Purpose of this is to determine whether an inexpensive fan can be installed at less cost than heavy insulation, also taking into account operating costs for the fan. In other words, how much ceiling insulation is an attic fan equivalent to? Does it pay to use a fan to cool the attic?"

Windows in this house will be single glass to check against double glazing in House No. 1.

House No. 4 will be similar to No. 3 with certain exceptions: different types and thickness of insulation; different roof, possibly with little or no attic ventilation; no vapor barrier over ceiling; no exhaust fan in kitchen, or an exhaust fan in the "worst possible spot."

House No. 5 will be the same house as one of the first four but can be orientated 90° to east or west. "Test results will show how much more cooling you need for a house with big windows facing either east or west compared to the same house facing north or south. This is extremely important for builders who build similar houses in a project where houses end up facing all the points of the compass."

House No. 6 will be identical with one of first five except one will be a slab house, the other will be over a crawl space. Tests will determine exactly how much extra cooling a crawl space house requires as compared with a slab house.

Houses 7 to 10 will emphasize various type of air conditioning systems, although some design changes may also be incorporated.

House No. 7 may use a year-round duct system of the perimeter type embedded in the slab.

House No. 8 would use overhead ducts.

House No. 9 would employ a crawl space plenum system. This would use no ducts. Air would be forced into the crawl space, which must be tightly closed and vapor sealed, and then into the rooms through perimeter registers.

House No. 10 would use small pipes for heating and cooling—either 3½-in. or 4-in. ducts.

Houses 11 and 12 would include combinations of features for checking results of other houses, such as complete shading vs. no shading, etc.

Ft. Worth Home Sponsored by Coleman Will Study Air Conditioning Costs

WICHITA, Kans.—For the next 12 months, a private home in Fort Worth, Texas, will serve as a laboratory for scientifically measuring the cost of operating air conditioning equipment under actual day-to-day living conditions.

Sponsored by the Coleman Co. here, the house and its electronic recording devices were viewed by more than 10,000 persons during a public showing held in connection with National Home Week.

The Coleman house is equipped with a combination heating and cooling system which operates with a new type water-saving evaporative condenser. Special instruments automatically record temperature and humidity conditions both inside and outside of the house. Gas, water, and electricity for year-round air conditioning will be recorded on separate meters.

Tests being conducted in the Fort Worth house are part of a major campaign to replace "guesstimates" with facts about operating costs, Sheldon Coleman, president and general manager of Coleman, said.

"In the final analysis, the air conditioning industry will stand or fall on its ability to prove that operating costs are low enough to justify year-round central air conditioning in houses costing less than $15,000," he added.

The Fort Worth fact-finder house is a deluxe version of the Coleman "Trend Home" designed last year by Ned A. Cole, Austin, Texas, architect and chairman of the air conditioning committee of the National Association of Home Builders.

"Like the prototype and more than 50 regional variations of the Trend Home built this year, the Fort Worth house is a one-story, ranch style house with a high degree of open planning and maximum utilization of space for family living," the company said.

"The design of the house satisfies the demand for both year-round air conditioning and large window area combining maximum indoor comfort and outdoor outlook.

"To reduce the cooling load and still retain living features desired by the home buying public, the Trend Home design specifies a well-ventilated attic and low pitched roof surfaced with heat reflecting marble chips.

"Without sacrificing light and visibility, windows are placed so that they are not exposed to the summer afternoon sun. Special attention was paid to wall and ceiling insulation and to the vapor seal beneath the floating slab floor and around the perimeter of the house.

"Two small exhaust fans located in the kitchen dispel heat from cooking and food storage appliances.

"Careful consideration of heat and moisture producing sources have resulted in a house which can be effectively cooled with a relatively small unit."

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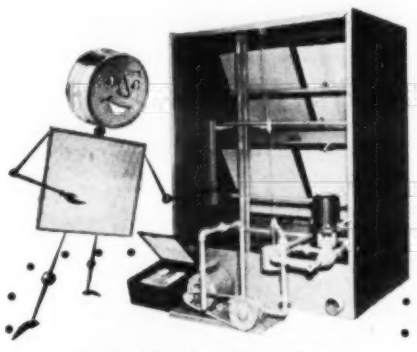

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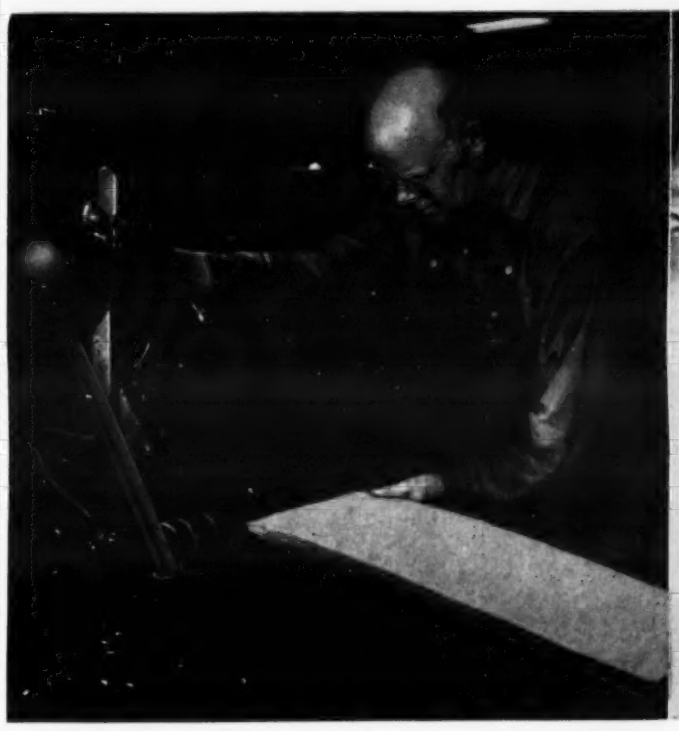

Ultralite Duct Liner, the long glass fiber insulation, has the rugged strength that enables you to acoustically line ducts at the same time you form them! Simply adhere Ultralite to metal before running it through brakes and shears. No danger of ruining the insulation on the truck or on the job, for Ultralite is resilient — won't flake or crumble.

Old hands report duct insulation savings up to 50% when they use the new "wrap-'n-staple" method of insulating ducts with ULTRALITE, the long glass fiber insulation. Simply wrap the duct with vapor-barrier-faced Ultralite. Use a special stapling gun to secure the seams.* (Ultralite has the tensile strength that makes this time-saving step possible.) Apply tapes over seams, paint them with waterproof mastic, and finish as desired.

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THANX AND A TIP OF THE HATLO HAT TO J.G. RICHARDSON, 2731 S. CLEVELAND ST. ARLINGTON 6, VIRGINIA
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The Nautilus Hotel, Miami Beach, Fla.

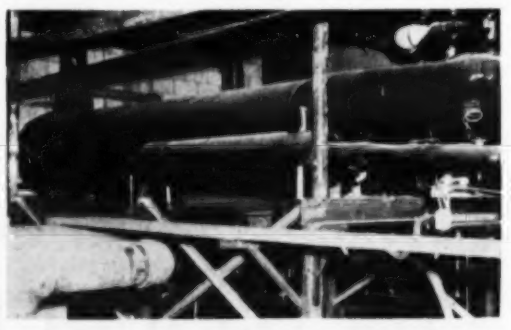
The newly-built Nautilus Hotel in Miami Beach, Florida, maintains a high degree of occupancy by offering its guests all the comforts that modern design and modern production make available.

One of the chief customer getters is the cool and comfortable air conditioning system that produces an atmosphere of complete relaxation throughout the building.

Included in that system, are two Acme Dry-Ex water chillers, cooling 1000 gallons per minute. Selected with two circuits each, the Acme equipment was recommended as having balanced circuits furnishing full tonnage to each of the two compressors. The modern design of the Acme Dry-Ex Chillers allows them to handle the 250 ton load with ease. The installation was engineered by John K. Sasnett of Sasnett and Bennett and was installed by Giffen Industries, Inc., Miami, under the supervision of T. W. Hendricks.

air Conditioned means higher occupancy

the NAUTILUS uses Acme Dry-Ex Water Chillers for a better air conditioning system



Another Acme installation at the Nautilus is a Flow-Cold Packaged Liquid Chiller which provides chilled drinking water to the hotel's outlets without requiring a storage tank.

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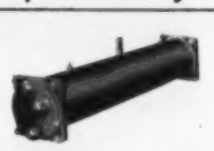
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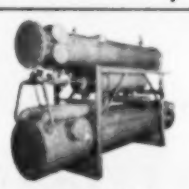
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Wisdom from Eisenhower's Canniest Teammate, Joe Dodge

EVERY year's sales volume and profits cannot continue to move above the previous year's record indefinitely.

Furthermore, a leveling off is not a slump, according to wise Joe Dodge, the Detroit banker who is Director of the U. S. Budget and Eisenhower's key financial advisor.

"We have been riding the inflationary escalator for nearly 12 years—and that is altogether too long," he declares. "Orderly business adjustments can level off these inflationary trends without causing a depression."

Whether we step off the escalator onto a platform or into an abyss depends upon our acceptance of realistic changes and moderate adjustments such as now are going on. Production has been multiplied 50 per cent during the last decade, and we have satisfied most of the shortages.

"Again we are entering a competitive business era. This era won't yield to the inflationary philosophy that sales volume and profits should increase annually," Dodge insists.

The next two years are critical in Eisenhower's budget-balancing effort. They embrace peak spending programs inherited from the Democratic regime.

At the beginning of the 1954 fiscal year (last July 1) an estimated 81 billion dollars of unfinanced appropriations existed as a claim against current and future Government income and borrowing. They have the effect of C.O.D. orders.

"The facts suggest that we are in a costly trap of built-up dollar demands on the Government for domestic purposes, many of them made mandatory by existing legislation, on which there have been imposed staggering military expenditures," shrewd Joe Dodge continues.

"Past fiscal policy is clearly reflected in the record of 13 consecutive years of budgetary deficits since 1934 and 17 years of deficits in the last two decades."

He compares our national financial dilemma to that of a family which:

"Consistently lived beyond its income for two decades; had five years of real adversity (World War II); acquired a debt four times its yearly income; owed more than a year's income on C.O.D.'s that must be paid for on delivery; had a mere month's living expenses in the bank; had relatively little margin before reaching its borrowing limit; was aware of a 10 per cent reduction in income, and had no immediate plans for changing its extravagant habits."

Dodge adds that it is the "understatement of the century" to say that public pressure groups are responsible in major part for domestic costs.

"Law has been piled on law and program on program requiring service and expenditure without offsetting substitutions or subtractions," he observes.

Grants to states for debt assistance, buildings, boondogglings, etc.; to War Veterans for all sorts of things; pensions and benefits to government bureaucrats; agricultural price supports; and interest on the public debt comprise heavy inroads on our tax money.

Military functions and outlays, foreign giveaways, and the Atomic Energy Program cost billions, too. All of these money-burners are worthy. All have their pressure blocs. But the line has to be drawn somewhere.

"We have to insure the nation on the military front. And, at the same time, not weaken or destroy its economic stability and vitality," Dodge concludes. "A sound domestic economy is the foundation of an effective military defense."

AMEN.

"Slants on Service" is a "package" devised by the NEWS to aid readers in the service and contracting business.

Give Drier Enough Time Before Condemning It

To a serviceman who complained that the first drier he had installed on a domestic freezer in which the expansion valves were sticking with moisture "had no apparent effect after three hours" but one of a different make cleaned up the job immediately, John Bopp, chief chemist of Ansul Refrigeration Division suggests:

"Removing a drier within three hours and stating that the drier is worthless is not giving anybody's drier a fair chance.

"Completely drying out a refrigeration system is a slow and tedious job. With water trapped in the receiver and in the coils, together with water being held by the pores in and on the walls of the metal of the unit, it is often a difficult task to accomplish this drying procedure except over a long period of time with appreciable quantities of drying material.

"Manufacturers use extremely rigorous drying methods which often involve much longer periods of time than the three hours mentioned. Driers should be and are somewhat slower.

"Give the drier time to do its job. It may be necessary to allow the flow control to warm up and remain wide open for a period in order to prevent freeze-ups while the drying operation is taking place," Bopp declares.

SERVICEMEN RIDE to their jobs in this radio dispatched truck. Time saved in parking nets S. S. Fretz Co. $3 a day per serviceman.

Radio Dispatched Truck Helps Service Firm Get Servicemen Where They Are Needed Most

PHILADELPHIA — Mobile flexibility and two-way radio are helping the S. S. Fretz Co. lick the problem of getting servicemen where and when they are needed in traffic-choked downtown Philadelphia.

With an average of 2,000 to 2,500 service calls a month—the majority are on service contracts—a staggering amount of time formerly lost in parking has been recovered by the aggressive Chrysler Airtemp dealer.

In the mornings, the Fretz radio truck drops three to five servicemen off on scheduled downtown Philadelphia calls. After completing the first trip, the truck is driven to a side area where it awaits orders to pick up the servicemen after calls are completed and drop them off at other locations.

Since March 1 the van has saved $2 to $3 a day per serviceman, who otherwise would have to use separate trucks and pay parking fees. The average daily number of service calls per man has been increased from five to eight.

The emergency van is completely equipped with filters, "Freon," and parts for "packaged" and radial air conditioners. While awaiting dispatched orders, the truck delivers filters and spare parts to near-downtown locations where parking is not a problem.

Fretz Service is a separate division of the S. S. Fretz Co. handling all service, delivery, and shop repair. The division employs 22 servicemen, seven shop and parts men, five dispatchers, and office and warehouse employes. The Fretz fleet numbers 16 trucks.

According to S. S. Fretz' president, W. J. Heggie, the radio-equipped van is one of the best goodwill and useful innovation the company has.

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WHY WAIT?

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Gordon Heads Sales for Div. of Torrington Mfg.

TORRINGTON, Conn.—Robert M. Gordon has been appointed sales manager for the Torrington Mfg. Co.'s Air Impeller Div. here, it was announced recently by Dudley B. Robinson, vice president in charge of sales.

R. M. Gordon

Gordon joined Torrington as assistant sales manager in the Air Impeller Div. last February following his resignation as a sales executive with the Milford Rivet & Machine Co., Milford, Conn.

A sales engineer with Penn Rivet & Machine Co. of Philadelphia when that firm was absorbed by Milford in 1945, Gordon was appointed sales engineer for Milford in 1946 and subsequently was named assistant general sales manager.

Aeroquip Buys Plant of Sterling Motors In Ohio

JACKSON, Mich.—Pressed by the need for additional operating facilities and storage space, Aeroquip Corp. has acquired the plant of Sterling Electric Motors, Inc., at Van Wert, Ohio.

Situated 100 miles south of Aeroquips' main plant in Jackson, the year-old, 45,000-sq. ft. Van Wert plant, whose replacement value is about $500,000, is located on an 11-acre plot between the Pennsylvania Railroad's New York-Chicago main line and the Lincoln Highway, U. S. 30.

Aeroquip manufactures flexible hose lines with detachable, reusable fittings, and self-sealing couplings.

"The newly-acquired plant offers highly efficient operating facilities which will lower handling charges and permit an improved flow of material as well as enable the company to consolidate different warehouse locations into one easily controlled unit," Aeroquip stated.

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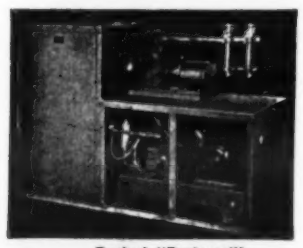

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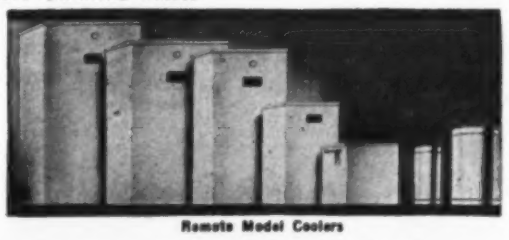
Sell your condensing unit with remote models for new and replacement jobs—all applications. Capacities 10-1000 g.p.h.; storage 7-300 gals. Filters, Rectifier-Dechlorinators available for all sizes.



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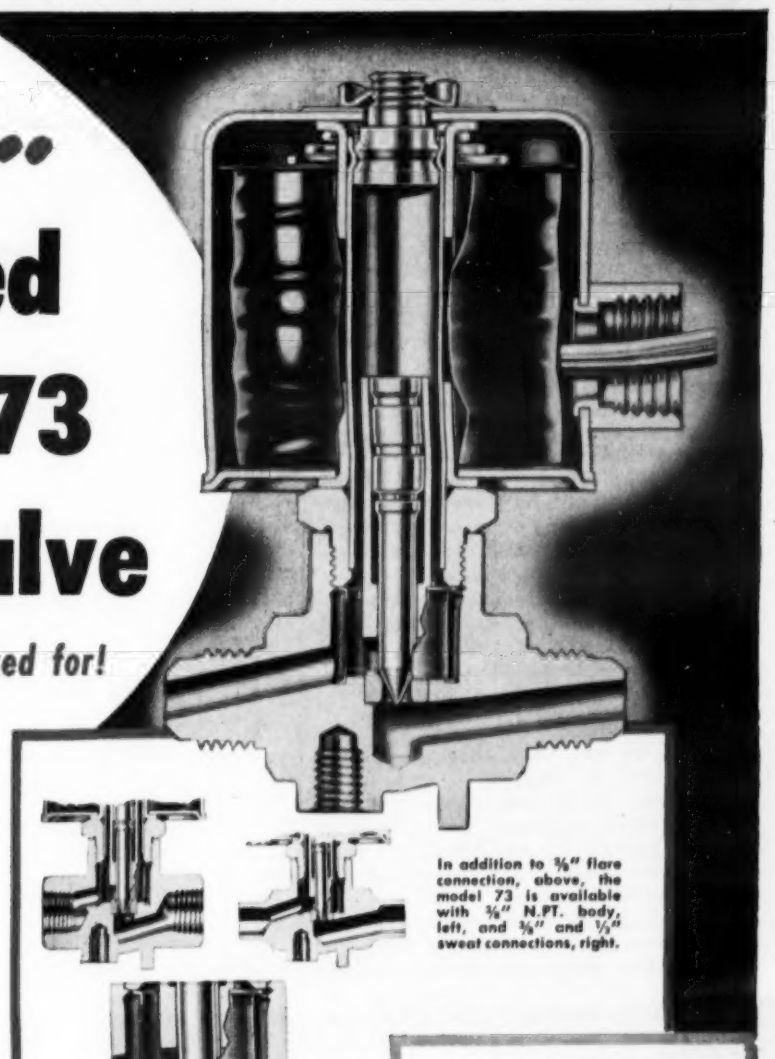

So versatile . . . you can use this solenoid valve for any refrigeration job

Wherever you need a solenoid valve . . . regardless of the type of connection required . . . you'll find that the Model 73 suits your needs exactly. This improved valve is made in four body styles: 3/8" N.PT., 3/8" flare and 3/8" and 1/2" sweat. The coil cover can be rotated a full 360° to accommodate electrical connections from any direction. Can be used for any non-corrosive liquid, and for air and refrigerants. Get all the facts about the dependable A-P Model 73 Solenoid Valve. Write today.

In addition to 3/8" flare connection, above, the model 73 is available with 1/4" N.PT. body, left, and 3/8" and 1/2" sweat connections, right.

Above, non-corrosive, easily removed screen protects needle and seat against damage from grit and dirt; eliminates danger of dirt holding valve open.

Coil cover is held with one nut. Can be rotated in any direction to simplify electrical connections.

6 reasons why the Model 73 is your best buy!

1 Double-dipped, varnish-impregnated coil assures efficient performance under extreme humidity conditions.

2 Valve is equipped with long-life, quiet, floating plunger.

3 Removable, non-corrosive screen protects needle and seat; eliminates danger of dirt preventing proper valve closing.

4 Coil is easily changed to suit voltages required for any special application.

5 Plate with complete electrical data accompanies each interchangeable coil.

6 Available with three orifice sizes — 5/32", 3/16", 7/32".

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Packaged Auto Air Conditioning?

Lower Costs, Easier Service, and Broader Merchandising Base Seen As Advantages; Noise, Power Transmission Are Problems

DETROIT—A trunk-mounted package unit driven by a flexible shaft from a power take-off at the engine may be offered for car air conditioning in the future.

Such a package unit would not only offer numerous advantages but is the next logical step, the American Society of Body Engineers, Inc., was told at its annual technical convention here by Franklin W. Edwards, Detroit sales manager of Eaton Mfg. Co.'s Heater Division.

A self-contained unit in the trunk, however, tends to be noisier than present designs, besides posing the power transmission problem, it was brought out in the discussion following Edward's paper.

"Twenty-five years ago," Edwards said, "the mechanical icebox with a remotely operating condensing unit disappeared from the American market to be replaced by the self-contained food storage cabinet we know so well today. Along with this transition came standardization and higher production bringing with them lower prices and expanded markets. As a direct result, the household refrigeration industry stepped from infancy into the mature giant it is today.

Comfort Conditioners Followed Same Pattern

"Within the last 10 years, and particularly in the last two summers, we have witnessed a similar transition in the field of comfort conditioning. Again, this change was brought about by the easily marketed, lower priced, easily installed, self-contained window and room-type cooler.

"Today we see this same pattern developing in automotive comfort conditioning. It has reached the remote operation phase and already it is feeling the pinch of installation difficulty, service problems, high costs, and lack of adaptability to modern, high speed car production lines. The same type of design change is again needed if this product is to take its rightful place in tomorrow's mode of life and standard of living.

"Today's automotive air conditioning system differs from the earlier ice machines and room coolers only in that it is installed from bumper-to-bumper instead of from basement-to-kitchen or bedroom. The same inherent installation difficulties, high costs, and service problems exist," Edwards declared.

What Is Needed?

"If we are once more to bridge the gap to simplicity and wider markets, it is imperative that the automotive engineer and designer look toward the self-contained cooling unit. But what, exactly, should we be looking for?

"We should be searching for a system contained in a single box. The 'package' should be independent in nature and capable of producing its designed cooling output by just 'plugging' it into a power or driving source.

"This unit should be standardized in design, at least for a single make of automobile. It should leave its point of manufacture completely assembled, charged, tested, warranted, ready to cool, ready to be easily set into the automobile, either at the car assembly plant, or in the field.

"Of course, it should be small enough in physical size to fit into the car without seriously reducing usable space for passengers, engine, or luggage.

"It must be quiet, lightweight, and styled for 'shelf appeal.'

"The unit must be not only easily installed but just as easily removed for service. In many respects it should closely resemble the automobile radio in that it can be operated and tested before actual installation, and easily installed without disturbing other major body parts. Like the radio, it should be easily removed for service or replacement by the dealer. When removed, it should leave the vehicle operative until it is replaced.

"The car owner should be able to drive to his dealer, have the unit slipped out, and then continue to drive his own car to his destination. The owner should then be able to have the unit re-installed at a later time with little time loss or inconvenience to himself," Edwards emphasized.

"What will be the problems facing us in reaching these objectives? First, this small box or container must contain a compressor, condenser, condenser blower, liquid receiver, controls, evaporator, evaporator blowers, and the necessary interconnecting piping. These components must be sized to provide nearly 30 times the cooling capacity of the household icebox but must occupy only about one-sixth the space required by a modern refrigerator. It should have 10 times the capacity of the now familiar window unit, and not be larger or much heavier. Furthermore, this box must be able to 'ride' down the roughest of roads, at the highest of speeds, without mechanical trouble.

"Once we have met these initial space and capacity requirements, we must seek an answer to the method or drive, or power source. Since we expect to 'plug' it into the car somewhat as we connect our modern household equipment, we must look for a power supply with similar advantages.

Three Sources of Power

"At this moment, interest has already been shown by the industry in at least three power sources. We already know work is progressing on electrical drives, oil pump-motor combinations, and mechanical drives.

"The electrical drive unit will probably have a large capacity, 3,000 to 4,000-watt, high voltage, alternating current generator. This generator would no doubt be located in the engine compartment in place of the present generator. Rectifiers could then be used to supply the lower direct current voltage required for lighting and ignition. Adequately insulated wiring would then run to the self-contained unit. There, an electric motor of approximately 3 hp. would do the driving required. Truly this would give us the closest approximation to 'plugged in' convenience.

"The oil pump-motor combination will probably consist of a system a little like power steering. It would have an oil pump mounted on the engine and an oil-driven motor located in the self-contained unit. These two units would then be connected with oil supply and return lines. The adoption of aircraft-type quick pipe disconnects will probably help to give this system 'plugged-in' convenience," he said.

"The mechanical drive will no doubt consist of a power take-off and clutch mounted to the engine, probably belt driven in the early development stages. From this power source a flexible drive cable will run to the self-contained unit where it can be 'plugged into' the unit. This cable will be similar in construction and characteristics to a speedometer cable, but larger in size and torque capacity.

"Not enough information is yet available to predict which drive method will ultimately get industry-wide approval. Early reports indicate, however, that the mechanical drive might be the quickest and most economical to adopt at this stage of development," Edwards commented.

He pointed out that Eaton has a magnetic clutch type power take-off with a governor that provides two speeds. Above a predetermined car speed, the power take-off automatically drops into low speed, thus avoiding the problem of excessive compressor r.p.m. at high car speeds, he explained.

Because it is magnetic, the drive can be turned off by a flick of the switch when air conditioning is not desired, thus avoiding unnecessary wear of the compressor, Edwards also said.

Immediate Benefits Cited

"If we were to make the transition to self-contained units shortly, what would be the immediate benefits?" he continued.

"1. Fewer Engine and Chassis Modifications:

"Since there is no condenser ahead of the radiator, there will be no effect on engine radiation. There will be no need for radiator and radiation system re-design. At the same time it will require a minimum of front-end sheet metal revision. Because the driving unit attached to the engine will mean less than one-tenth of the present compressor weight, it is expected that no compensation for this weight in engine balance will be required. The weight of the cooling unit will be over the rear wheels instead of a large part being over the front suspension. Therefore, special attention to steering, springs, and shock absorbers for the front suspension will not be required.

"2. Improved Ride and Traction:

"Since the weight will be primarily over the rear wheels, the weight will be away from the already heavy front end and be distributed where the extra weight can be used beneficially for improved ride and traction. The over-all weight of the system does not need to be greater than presently used.

"3 Lower Installation Costs:

"Almost all of the assembly, charging, and testing labor will have been included when the unit is origi-

(Concluded on next page)

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AMP BRINGS ECONOMY AND EFFICIENCY TO AIR CONDITIONING & REFRIGERATION WIRING

Packaged Auto Air Conditioning--

(Concluded from preceding page)

nally assembled. The actual installation on the automobile production line or in the dealer's service department will more closely approach the time and most of installing our present heating systems. Since the complete operation involves far fewer parts, the problems of scheduling are reduced. It will permit a more localized installation, thereby resulting in less interference with the normal production techniques and procedures.

"4. More Assembly Plant Flexibility:

"Some automotive final assembly lines do not have provisions for accessory installations, or even the space required. With the unit system the complete installation could be made almost as easily after the car is completed or when accessories normally are added. It would give the automobile manufacturer a choice of installation procedures without penalty.

"5. Lower Initial Costs:

"The basic concept of a single package lends itself to standardization of design and manufacturing. It appears that one basic unit can be made to fit most models of American automobiles. Planning ahead will make this even more certain. Thus higher production volume of one design will improve the buying position and reduce costs accordingly. Also, complete production of the unit itself can take place where assembly costs are most favorable, and where labor can be used most efficiently.

"6. Dealer Installations Made Possible:

"The installation is a mechanical one and does not require special refrigeration know-how or tools. Every dealer could become an outlet for the unit. It will permit the dealer to handle installations for cars sold from the floor as well as those equipped at the factory.

"7. Field Service Problems Will Be Reduced:

"Since refrigeration know-how is not necessary, the dealer is in a position to decide for himself whether it is best for him to do his own work, or to work in cooperation with a local refrigeration expert. In this respect it will be more like the present day radio service policy. It will minimize the problems now apparently due to local refrigeration codes and labor policies.

"8. Improved Customer Relations:

"When trouble is experienced the unit can be serviced or replaced without tying up the car. The owner can continue to use the car while the refrigeration work on the unit is being done. Since the unit can be independently operated and tested before actual installation, the customer is almost certain to leave with a satisfactory repair job.

"9. Broader Sales and Merchandising Base:

"The advantages mentioned add up to lower costs and greater dealer ability to handle the product. Every dealer is a potential sales outlet and since the service problems are minimized, every dealer will feel capable of pushing the sale of the unit. More outlets always mean greater sales and a broader base of operations. More sales will mean lowered costs, and ultimately more sales at the lower prices. This is the cycle that is the dream and objective of every merchandising man.

"10. Does Not Interfere With Individuality of Installation Detail or Performance:

"The unitized system only represents a method of producing the cooling effect most efficiently. It lends itself easily to any concept of air distribution now being used and its inherent capacity can meet the many variations in requirements now under consideration.

Commercial, Home Systems Followed Same Pattern

"Twice before this, the refrigeration industry has seen the development from sprawling, remotely-operated systems to compact, low-cost, self-contained units, and through this development has seen home and industrial refrigeration and air conditioning become an integral part of everyday life.

"And now the familiar pattern is here again. Automotive air conditioning is a fact; the demand for this latest refinement in modern motoring has been adequately proven; the potential market is tremendous. We have only to follow through with the established pattern to make automotive air conditioning the third in refrigeration's series of contributions to the American Way of Life!" Edwards contends.

Present Costs Are Similar

Questioned as to whether a package unit would mean lower costs, Edwards replied:

"Production is still low, and the cost of purchased parts is about the same for both the package and present designs of car air conditioning systems. With the package, however, there should be savings in labor costs."

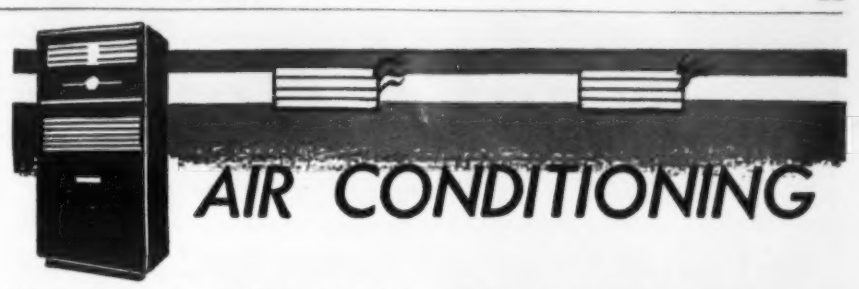
Revealing that Chrysler engineers "have worked up no less than three distinct types of package systems," P. J. Kent, executive engineer of Chrysler Corp., declared, "we've made a lot of improvements but we don't have anything in a package air conditioner to offer the public just yet.

Kent of Chrysler Expresses His Views

"I agree with Edwards 100% on his speculation but not on his practical solutions. We're all working on the problem of package units, but we have considerable noise as well as the problem of power transmission."

According to Kent, having all the components in a package in the trunk means that the compressor noise is readily carried into the automobile.

There is also a problem, he said, presented by the fact that "body styles and trunk dimensions change frequently. This year the spare tire may be vertical at one side of the trunk. Next year it may lie flat. I don't see how a package unit could meet these changing requirements even in one line of cars, not to mention all makes."



Dickson Heads Airtemp's New Florida Sales Region

DAYTON—E. D. Dickson has been named to head Chrysler Airtemp's new Florida sales region, J. F. Knoff, vice president and general sales manager, announced.

E. D. Dickson

Dickson has been associated with Chrysler Airtemp since 1940. He has served as supervisor of planning, staff specialist, and recently as manager of the parts and order department. Before joining Airtemp, he attended the University of Dayton and Graceland college, Pomona, Iowa.

Headquarters for the new sales region will be at 2357 S. W. 22nd St., Canal Way, Miami. The territory will include southern Georgia and all of Florida, excepting the Pensacola area.

Establishment of the new region brings the total number of Chrysler Airtemp sales regions to 15.

Cooling Firm Solicits Groups with Club Houses

JOHNSTOWN, Pa.—Joe F. Sobieski, air conditioning contractor, promotes business by appealing to clubs and organizations having their own club houses.

The firm ran an advertisement during midsummer which was captioned: "Turn Off The Heat. Have Your Clubrooms Comfortably Air Conditioned."

G-E Air Conditioning Div. Names Falkingham, Grant

BLOOMFIELD, N. J.—H. H. Falkingham and W. H. Grant have been appointed as home heating and cooling sales representatives of General Electric Co.'s Air Conditioning Div., according to L. M. Larkin, midwestern regional sales manager of the G-E Div.

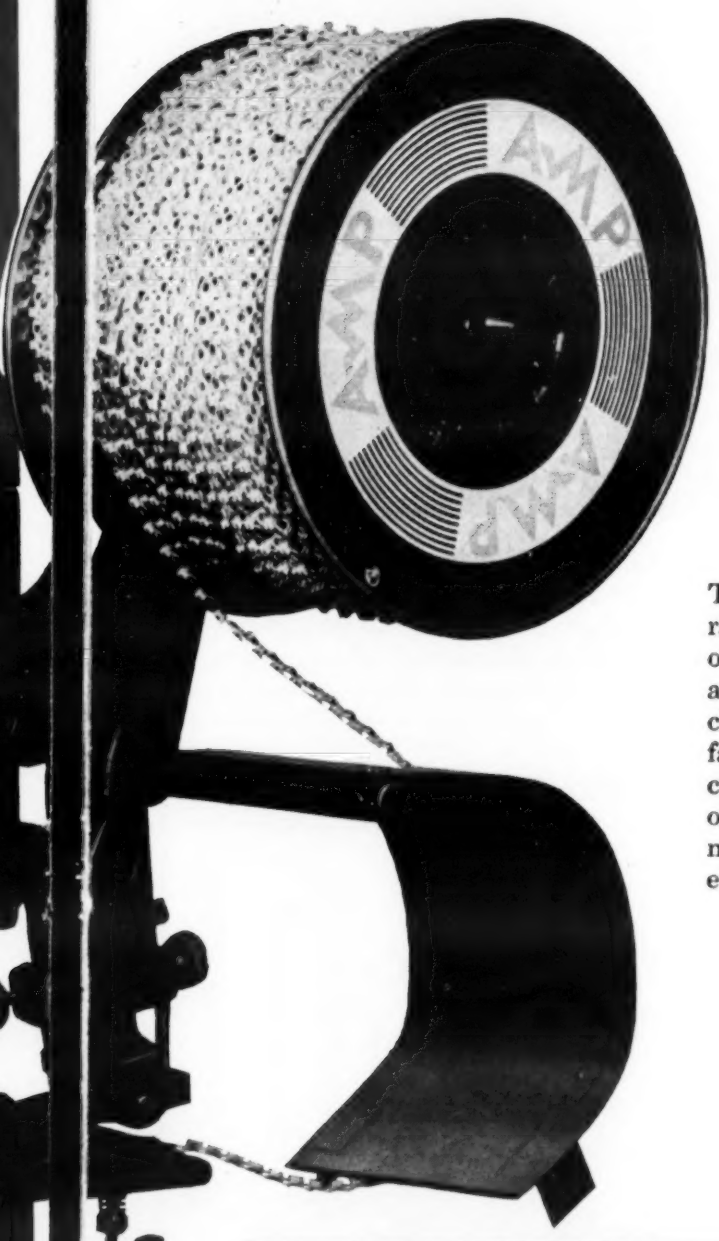
Falkingham's territory covers Kentucky, southern Indiana, and part of western Ohio. His headquarters are in Louisville, Ky.

Grant's territory includes Michigan and northern Indiana. His headquarters are in Detroit.

Falkingham joined General Electric in June of 1952. He was formerly with Williams Oil-O-Matic as eastern field sales manager and assistant to the general sales manager in the home office.

Grant joined General Electric in May of 1953. He was formerly president of Midwest Heating Service, Waukegan, Ill.

Both Falkingham and Grant will handle the complete line of the G-E Home Heating and Cooling Dept., including boilers, furnaces, and home cooling units.



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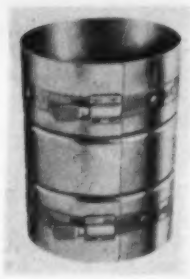
What's New

When requesting further information on new products, please use "Information Center" form.

No Tools, No Crimps with Furnace Pipe, Connector

——KEY NO. C-1131——

WADSWORTH, Ohio — A new aluminum or galvanized pipe for furnace or ventilating use is fastened rigidly to pipe or fittings by a new connector, without crimps or tools, the Ralph Mfg. Co., Inc. here announced recently.



The new "Jenkins Speed - Lok" pipe is shipped nested in 5-ft. lengths, and requires very little storage space. It is not necessary to hammer the seams. A tab is located every 6 in. along the male seam.

When the pipe is closed with the hands, each tab slides through a corresponding slot in the female seam. The tabs are bent over with finger pressure, locking the pipe in a rigid, positive lock which will not break, even if cut after assembling, the manufacturer says.

The Jenkins pipe is not crimped at the joints, but is connected by the new Jenkins "Tite.Aire" pipe connector. The elimination of crimps results in a more efficient, quieter air flow, it is claimed.

The new pipe comes in 4-in. to 36-in. sizes, in lengths of 5 ft. It can be easily carried to the job in a car, if necessary, and saves labor in making up runs.

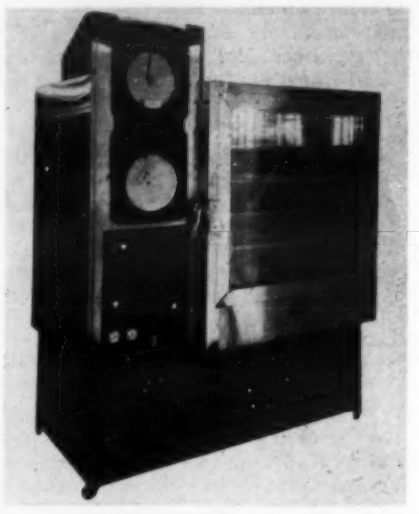
The new Jenkins Tite.Aire pipe connector makes it possible to assemble 20 ft. of Jenkins pipe in a minute, the manufacturer declares. Merely insert the pipes into each end of the connector and turn two aluminum worms to tighten. No holes for sheet metal screws need be drilled, and no other seal is required. Paper and paste are not necessary.

Joints will not vibrate loose. Similar types of connectors are used in vital aircraft parts, and meet stringent Army and Navy specifications. Stainless steel bands will not corrode or rust, even under adverse conditions.

The Tite.Aire pipe connector can be used with other makes of pipe. Since the Jenkins connector distributes stress evenly as it is tightened, it will not collapse any make of pipe under normal pressure.

It will connect tubing of sheet metal, plastic, fiber, asbestos, flexible steel or aluminum. It is available in sizes from 4 in. to 100 in. in aluminum galvanized steel, heavy gage steel, copper, and monel. The connectors are shipped 24 in a carton, ready to use, with or without dampers.

The new Jenkins pipe and connector are designed for perimeter, gravity, forced air, and ventilating jobs.



Cabinet Permits Testing In -20 to 200° F. Range

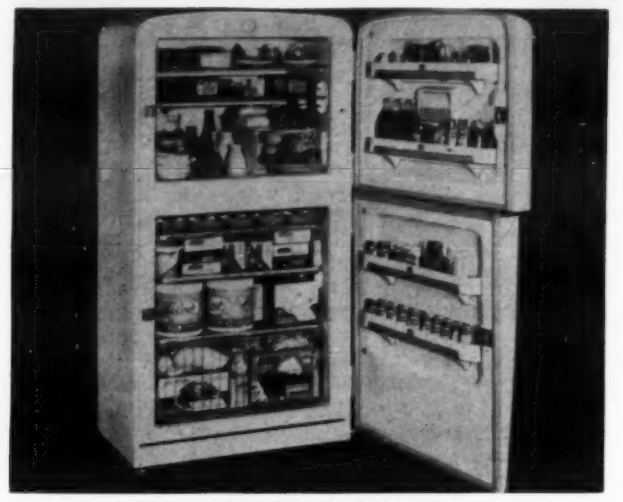
——KEY NO. C-1132——

HATBORO, Pa. — Package Materials Laboratories, Inc. here announces a new atmosphere control cabinet, model 15-CF, which has been designed and built for any type of moisture-vapor testing within the limits of -20° F. to 200° F. with a relative humidity of 18% to slightly under 100%.

The company said this type of cabinet is used primarily for testing all types of foods, greases, packaging materials, plastics, fabrics, tools, and chemical, biological, metallurgical, and pharmaceutical samples, or any materials which may be affected by temperature and/or humidity.

The cabinet may be ordered equipped with conventional or electronic controls.

11-Cu. Ft. Combination Has 6 Cu. Ft. of Freezer Space



——KEY NO. C-1133——

COOLERATOR REFRIGERATOR-FREEZER COMBINATION MODEL RDC66 is two appliances in one cabinet—a 5.6-cu. ft. refrigerator and a 6.28-cu. ft. freezer—a total of 11.88 cu. ft. capacity. Refrigerator has automatic defrost, adjustable shelf arrangement. Clear plastic Crispolator holds 18.3 qts., meat tray holds 6 lbs. It has 2 handy door shelves, built-in butter saver. Freezer has adjustable shelf arrangement, handy roll-out basket for bulky hard-to-store articles, three magic-lift ice cube trays, one Plastray, and two handy door shelves.

Temperature Indicator Responds In 2 Seconds

——KEY NO. C-1134——

CHICAGO — Response to temperature changes in two seconds or less is obtained with model 328 "Fastherm" temperature indicator manufactured by Associated Research, Inc. here.

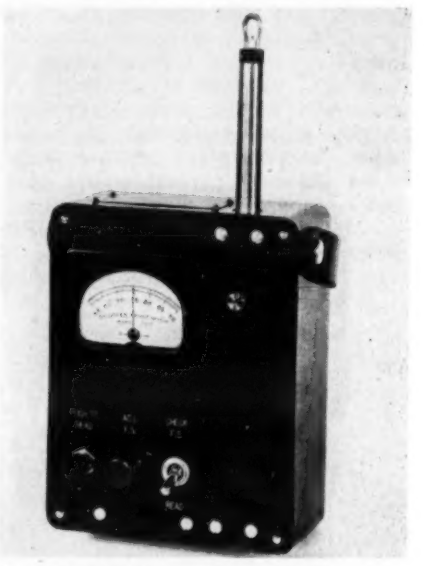
Originally designed for checking heating and air conditioning efficiency in railroad passenger cars, Fastherm is a self-contained battery-powered electrical bridge type indicating thermometer.

High response speed has led to other applications where temperatures other than ambient must be indicated quickly.

Fastherm sensing element is a thermistor, mounted in a protective cage at the end of a retractable prod. When in operating position, the prod extends approximately 4 in. above the top of the instrument case.

Temperature readings are made on a 2-in. meter with an accuracy of 3% of full scale. Standard model 328 Fastherm range is from 60° F. to 90° F. Other ranges, with approximately 30° full scale spread, are available from -20° F. to 220° F.

Two standard flashlight cells power the Fastherm, with a reported minimum life of six months in average service. Weight of the instrument, with batteries, is approximately 2½



lbs. Dimensions of the bakelite case are: 4 in. wide, 5 in. high, 1½ in. deep.

Current deliveries range from immediate from stock to 45 days. Fastherm model 328 price is $187.50 f.o.b. Chicago.

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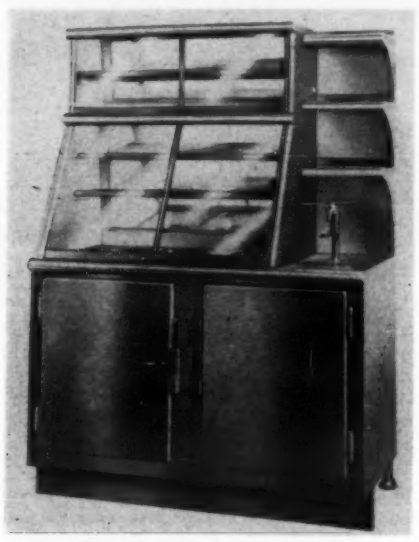


Dunhill Salad Coolers Include Water Station

—KEY NO. C-1135—

BROOKLYN—Making the case on Dunhill salad cooler units one foot shorter than the base allows for a refrigerated water station and three shelves for glasses, according to Dunhill Soda Fountain Corp. here.

The entire unit is made of heavy gauge steel with front facing clad in stainless steel. All joints are electric-welded. Interior and exterior back, ends, and bottom panels are sprayed with a thick coating of synthetic aluminum.

Two inches of pure vegetable corkboard insulation is used throughout. The corkboard is completely sealed-in with asphalt cement. Refrigeration is provided with a blower type refrigeration coil.

A water station is cooled with an HX 15-gal. instantaneous cooler, complete with all necessary valves, fittings, etc. A brass-cast, chromium-plated, push-back faucet with countersunk non-splash drip tray is located at the end of the pastry case.

Dimensions of the unit are: 24 in. deep, 36 in. high, 36 in. working height.

Westinghouse Making 'Tri-Snap' Thermostat

—KEY NO. C-1136—

PITTSBURGH—A new "low-cost" thermostat for quick-make and quick-break close temperature control is now available from Westinghouse Electric Corp.

Called the "Tri-Snap" thermostat, this temperature regulator "provides positive snap-action at minimum differential between 'on' and 'off'," the company said.

"This feature makes it particularly useful in refrigerators, air conditioners, and other household appliances where a slow-acting thermostat might cause radio interference.

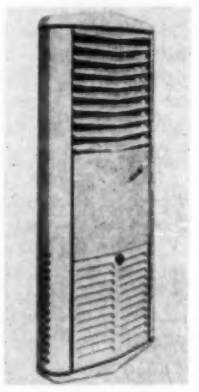
"An adjusting screw, which is easily designed in varying lengths and contours to meet special location and knob or dial attachment requirements, is another useful feature."

The Tri-Snap is available with an adjustable or non-adjustable temperature range. The standard range is from -80° F. to 300° F.

Magic Chef Gas Wall Heater Only 45 In. High

—KEY NO. C-1137—

ST. LOUIS—A fully vented circulator model gas wall heater that is claimed to be the smallest, most compact wall insert heater of its type was recently introduced by Magic Chef, Inc. here.



Called the PGW-25, the unit measures only 45 in. high, 16¾ in. wide, and 16¾ in. deep. It has an input rating of 25,000 B.t.u. and a heating capacity of 2,100 to 4,100 cu. ft.

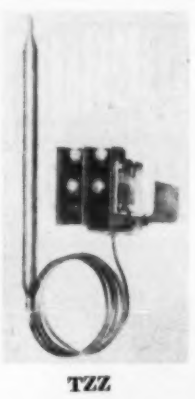
A four-pass heat exchanger passes air through four super-heated chambers. Fire welded combustion chamber minimizes expansion and contraction due to extreme temperature changes. Both are finished in porcelain enamel. Other interior parts have an aluminum coating.

One piece cabinet is easily removed by releasing two wing nuts inside the control panel. An attractive louver arrangement directs heated air downward and outward. The heavy raised port, cast iron burner is also easily removable.

An important safety feature is the cool air draft, engineered to cause cool air to rise and thus insulate radiated heat from the wood framing and assure low wall and stack temperatures, the company said.

Scientifically designed built-in draft diverter discharges chimney downdrafts away from the burner. No draft regulator is needed.

TZ



TZZ

Control Serves as Pilot Device on Package Unit

—KEY NO. C-1138—

MILWAUKEE—Single steps and two step air conditioning controls as pilot devices for panel assembly on packaged units have been developed by Cutler-Hammer, Inc. here.

These controls regulate air temperatures produced by commercial air conditioning units and provide approximately 2° differential over a range of 65° F. to 95° F. The new controls feature cross ambient fill of the power element which assures positive control of the air stream regardless of room temperature, according to the company.

The single step control, Bulletin 9508 Type TZ, uses one micro switch and is designed to operate with the bulb in the air stream.

The two step control, Bulletin 9508 Type TZZ, is designed for units which provide cooling capacity in two steps, incorporates two micro switches, and operates on the same principle as does the single step control.

Coleman Condenser Cuts Power, Water Costs

—KEY NO. C-1139—

WICHITA, Kans. — The Coleman Co., Inc., manufacturer of residential heating and air conditioning units, will enter the commercial refrigeration equipment field with a new type evaporative condenser, the "Aqua-Fog."

Distribution of the new units in 2, 3, and 5-ton sizes, will be through refrigeration equipment wholesalers and existing distributors of Coleman home heating and air conditioning equipment. Split coil circuits to meet commercial refrigeration requirements will be available.

The Aqua-Fog is designed for efficient heat transfer while maintaining economical head pressure under maximum operating conditions.

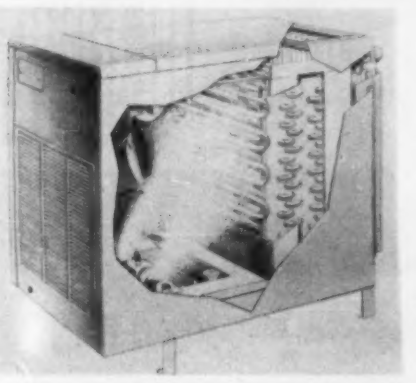
Heat transfer is accomplished by enveloping the condenser coil in a heavy mist. The mist is created by a turbulator unit consisting of a small sealed motor and two direct-mounted wheels which revolve at high speed in the water sump.

Revolution of the wheels, grooved and drilled to produce both a fine mist and a heavy wash spray, fling the water onto the coil surface. No nozzles, pumps, or belts are required, the company says.

A four-blade, pressure-type fan mounted above and behind the turbulator forces air over the wet coil to complete the heat transfer.

The heavy wash spray prevents formation of scale on the coil.

The amount of make-up water required for efficient operation is less than 3 gal. per ton of refrigeration per hour. Make-up water is controlled by a mechanically-actuated float valve. A water bleed cone removes buoyant debris and prevents excessive mineralization.



An eliminator section attached to the outlet grille removes excess water from the airstream and returns it to the pan.

When installed indoors a metal duct to remove the warm, moist air is easily attached to the outlet grille.

Over-all dimensions are the same for all three sizes. Height is 31¾ in.; width, 23⅝ in., and length 40⅝ in. Shipping weight of the largest unit is approtximately 350 lbs.

Coleman officials say the unit has proved highly successful where availability or disposal problems dictate use of a water saving device and where a combination of high dry-bulb temperatures and electric rates are unfavorable to the air-cooled condenser.

Extensively used with residential air conditioning systems, the Aqua-Fog evaporative condenser is expected to prove equally effective when operated with refrigeration equipment in food markets, small office buildings, and clinics.

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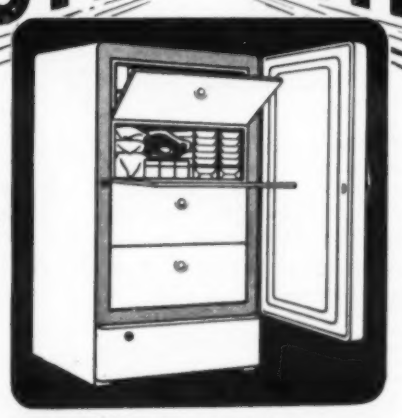

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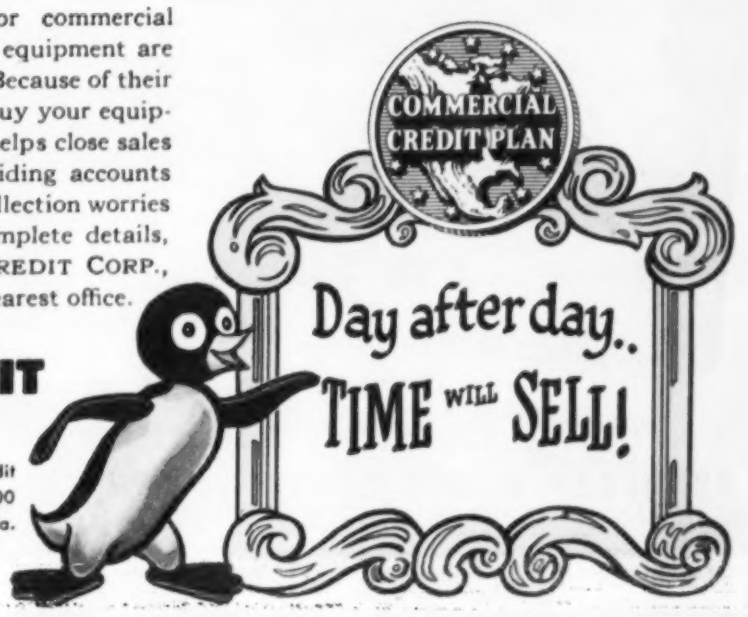

Commercial Refrigeration

EXPENSE WITHOUT PROFIT is what this conventional display room meant to Lawrence Dannemiller (center) up until last month. He had ample room to display his commercial refrigeration fixtures and other food store equipment, but he found the display was not paying off.

MOVING TO ANOTHER LOCATION, this is the way his store looks now. This is an operating grocery store, with the fixtures he sells doing the work they were intended for. Here are shown a Tyler dairy case (foreground), frozen food case, and vegetable case. Across from the frozen food case is another frozen food case, which does not have automatic defrosting.

FRED DANNEMILLER, Lawrence's son, handles the grocery operation and also sells fixtures on a part time basis. This section of the store demonstrates the use of both counter and self-service types of meat cases. As Dannemiller also sells the dry grocery gondolas, these are laid out to show the different arrangements possible.

Veteran Commercial Firm Operates Its Own Grocery To Display, Demonstrate Fixtures

AKRON, Ohio—If you should be day-dreaming as you walk into Lawrence M. Dannemiller's new place of business on North Howard St. here, you might find yourself walking out with $20 worth of groceries before you realized that there must be some mistake.

You didn't go in there to buy groceries. You wanted a meat case, not a sirloin steak. Dannemiller is supposed to be a commercial refrigeration distributor, not a grocer.

Well, he is. But after 15 years in the fixture business, he has come to the conclusion that he can sell more equipment by working out of a grocery store than out of the conventional type of commercial refrigeration establishment.

His conclusion is based on five years experience in working from a building that had the normal display of fixtures out front and office and repair shop in the back. It was painfully brought to his attention that this represented a lot of overhead that was not bringing in its share of the profit.

Having been in the wholesale grocery business for years before getting into commercial refrigeration, he had long toyed with the idea that the best way to convince prospects of the benefits of his equipment was to have them see it in a natural setting.

So he began looking around for a grocery store he could purchase. Last spring he got the opportunity to acquire a small store only a few blocks down the street. He took it, outfitted it with the Tyler fixtures and other store equipment that he handled, and turned it over to his son Fred to manage.

Calling the new venture Model Food Stores, Inc., he invited his prospects in to see the sort of job he could do for them, how the equipment looked and performed under actual field conditions, and what can be done in limited spaces. Space is very limited for the store measures only 85 by 29 ft. and narrows slightly toward the rear.

The idea proved so successful in terms of increased sales of fixtures, shelving, butcher equipment, and other items that Dannemiller determined to rid himself of his high overhead commercial refrigeration store and move in to the grocery lock, stock, and barrel.

The move was made in mid-October and was celebrated with an open-house for local retail grocers shortly thereafter.

The ground floor of the building looks like any other small neighborhood grocery. In fact, that is exactly what it is. But in the basement, Dannemiller has set up a display of other equipment he handles but which is not used in the store. The basement also acts as a storage area for small equipment.

GARAGE USED AS SERVICE SHOP, STORAGE

A double garage in the rear contains the service shop and storage space for used equipment. New large equipment is kept in crates in a public warehouse. Dannemiller believes that it will be cheaper for him to keep his inventory in a public warehouse than try to store it himself.

Along one wall of the grocery store, Dannemiller has a 12-ft. triple duty dairy case, a 12-ft. automatic defrosting frozen food case, and a

(Concluded on next page)

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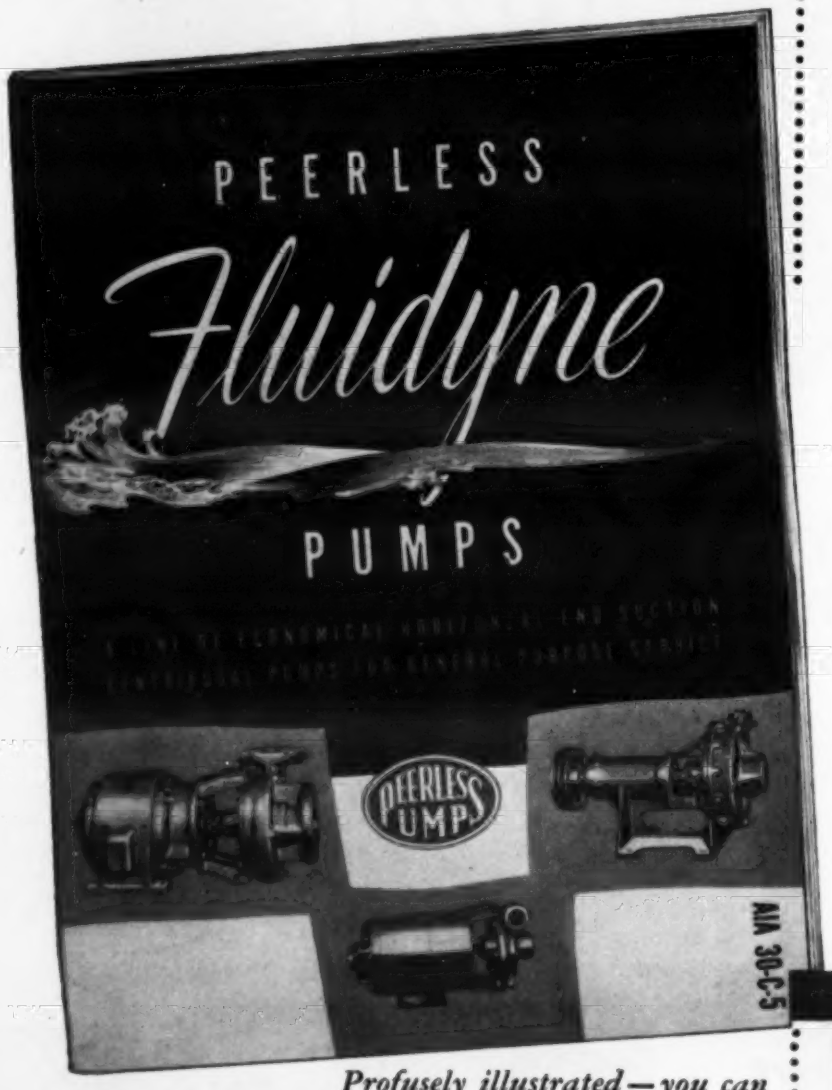

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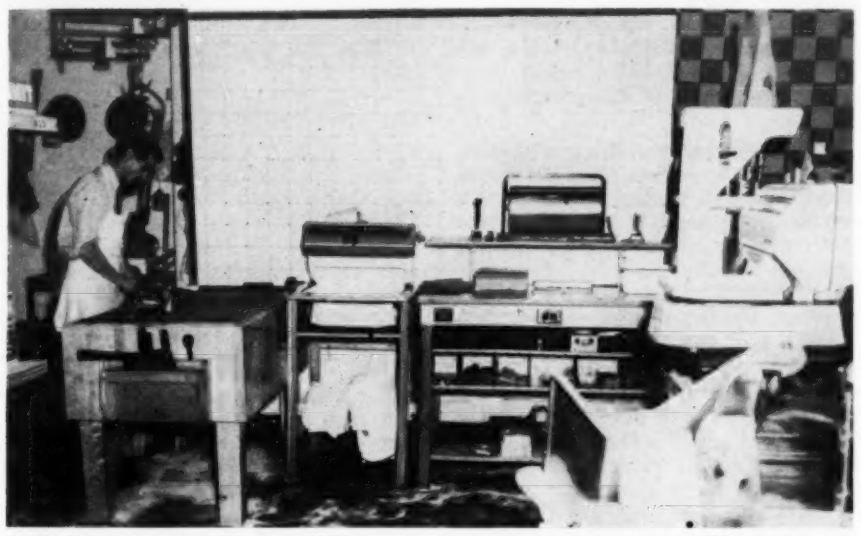

HOW LITTLE SPACE a pre-packaging operation can take is demonstrated in this small area behind the butcher counter. Fred works at the meat block. Ahead of him are scale and packaging table with all necessary equipment and supplies at hand, including a sealing iron sunk into the table top.

Commercial Firm Operates Grocery--

(Concluded from preceding page)

20-ft. produce case, all Tyler equipment.

Across the aisle from the frozen food case, he has a 9-ft. frozen food case of the non-self-defrosting type. With this case, Dannemiller expects to show prospects the difference between the two and particularly the advantages of the self-defrosting model.

Across the back of the store he has a 12-ft. double-duty closed meat case and an 8-ft. double deck self-service meat case, to demonstrate the uses of both types.

In the butcher's area behind the cases, he has a very compact pre-packaging set-up that is so arranged that the complete meat pre-packaging job can be done by one man without moving more than a few steps.

MODERN SHELVING DISPLAYED

The modern shelving for canned goods and dry goods is also arranged to demonstrate how the grocer can vary it to meet his needs.

When Dannemiller exhibits all his wares to prospective purchasers, he hopes to add the clinching argument that the store is not only a model operation to show off the equipment, but is also a profitable grocery in its own right.

Despite his new arrangement, Dannemiller recognizes that most of his selling will have to be done outside of the store—in the stores and restaurants of his customers.

Dannemiller's son Fred not only operates the retail grocery business, but also devotes part of his time to selling fixtures. When opportunity arises, he goes out and makes calls on prospects. And, Dannemiller commented, his experience gained from actually running the grocery store, will be invaluable in his fixture selling.

FAMILY RAISED IN GROCERY FIELD

The Dannemiller family has grown up in the wholesale grocery business. Dannemiller's grandfather, father, and three brothers have all worked in that field. He was in it himself from 1918 to 1941.

He got started in the commercial refrigeration business back in 1933, when during the depression years many small grocers got out of the business and turned their fixtures over to the wholesale grocer in payment for their bills.

As credit manager and treasurer of the Akron Grocery Co. Dannemiller acquired quite an inventory of used fixtures. It was up to him to sell them. After learning the hard way how to sell them and doing it for several years, he decided to sell new fixtures also. Gradually he got more and more into the business. When his family sold out its wholesale grocery business in 1941, he turned to commercial refrigeration as a full time occupation. He has been in the field ever since.

Dannemiller does about 90% of his own selling. His son does the rest. Barney Schneider acts as his floor manager, mechanic, and installation and repair man. For service he has arrangements with two independent servicemen who handle his calls on a job-rate basis. A part-time bookkeeper completes the organization.

Refrigerated Conveyor Helps A&P Meat Sales

JAMESTOWN, N. Y.—How a refrigerated conveyor, one of the first in the country, makes possible A&P's "revolutionary" way of selling meats was brought out in a full-page newspaper advertisement spotted by the A&P chain in this consumer market.

The ad pointed out how the best features of both service and self-service selling are employed in the A&P merchandising program.

Sketches were used to illustrate various phases of the meat operation. Said the ad caption:

"Now, to serve you better, A&P's revolutionary new way of selling meats and poultry offers you the convenience and speed of self service, plus attendants to weigh and package meats before your eyes, answer questions, and fill special orders."

Copy explained: "Have you ever longed for the same individual attention you'd get in a service meat department? Now you can have it. The friendly folks behind the open self-service cases will gladly have your meat cut just the way you want it and package it just for you as it comes out of the cooler on the refrigerated meat conveyor.

"It's this unique conveyor—one of the first in the entire country—that makes possible A&P's revolutionary way of selling meats.

"For by keeping them at a temperature of 30 to 35° on their way from cooler to refrigerated display cases, it eliminates the need for special air conditioned packaging rooms and partitions."

30° Angle Shelving Boosts Refrigerated Baked Goods Sales 35% for N. Y. Bakery

NEW YORK CITY—Slanting each shelf in three display cases at a 30° angle sells an estimated 35% more refrigerated bakery products for Cushman's Bakery in the new bus terminal of the New York Port Authority.

The stainless-steel, wedge-shaped refrigerated cases were built for the Cushman organization by Simon-Aire of New York. They have steadily boosted sales of whipped cream specialties, ice cream and pies, eclairs, cream puffs, and ice cream rolls since the day the store opened.

Each case is 4 ft. high, 5 ft. wide, and contains three levels of shelving of the stainless steel rod variety. Each level of shelving is slanted at a 30° angle to give equal visibility to all items whether at the rear or the front of the shelf.

The net result is "mass appeal," emphasis on the variety of specialties shown, and better over-all sales than produced by the refrigerated cases with standard horizontal shelves in use at other Cushman outlets.

Market Adds Dairy, Fruit Counter

MONTREAL, Que., Can.—A double decker refrigerated dairy counter and a new refrigerated fruit counter have been installed in Steinberg's market at 5600 Park Ave. as part of a modernization program.

GREATER PROFITS WITH THE Moisturizer VEGETABLE CASE

AVAILABLE IN 5'- 8'- 10' SIZES

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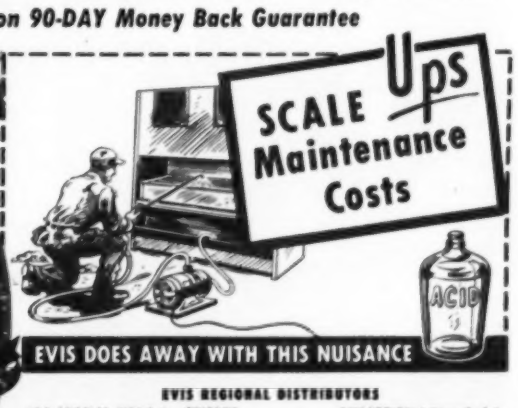

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In response to industry's need, Continental Motors has rounded out its line of air-cooled heavy-duty Red Seals by the addition of higher-displacement versions to all three series, both conventional and vertical shaft. These "85s" incorporate the same proven design as their 2 and 2½ h.p. companion models, but piston displacement has been increased to 8.5 cubic inches, to deliver a generous 3 h.p. at 3600 r.p.m. They combine all the other Red Seal characteristics—high torque at low speeds—quick starting—long, service-free life.

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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Detecting Methyl Chloride In 'Freon-12'

In the Jan. 19, 1953 issue under the heading "Identifying the Refrigerant," this column discussed the various methods by which the man in the field can determine the refrigerant used in a specific piece of equipment which he may be called upon to service.

Ordinarily, this should be easy—merely look at the nameplate. But for some strange reason, someone may have taken the nameplate off. It should never be done, but the fact remains that it is done right along.

It certainly makes it rough on the next fellow. It is bad enough if the nameplate does not have the amount of charge shown, but it is far worse if the service engineer cannot even tell what refrigerant the system is charged with.

He may be able to tell from the expansion valve, if one is used, or if there is enough charge to operate the system, he may be able to tell from operating pressures. Clipping a thermometer to the active part of the evaporator and then comparing this temperature with that corresponding to suction pressure will often serve to identify the refrigerant.

On air-cooled units, adding about 35° to room temperature and then looking this temperature up in the saturation pressure-temperature tables, gives the approximate head pressure, so the refrigerant can often be identified in that manner.

If some of the liquid refrigerant can be drawn out of the system into a small bottle, and a thermometer is immersed in the liquid, the pressure-temperature relationship will enable the refrigerant to be identified. When doing this, wrap a cloth around the bottle; otherwise the thermometer will read a temperature much lower than that representing zero gage pressures.

IDENTIFYING METHYL CHLORIDE—'F-12' MIXTURES

During the war and even after the war, when "Freon-12" was in short supply, some "Freon-12" systems were charged with methyl chloride. These are not too difficult to identify, for methyl chloride has a characteristically "sweet" odor.

On some "Freon-12" installations, when part of the charge was lost it was replaced with methyl chloride. If a large part of the mixture is methyl chloride, its presence may be detected by the slightly sweet odor. Small percentages of methyl chloride in the mixture may be almost impossible to detect by odor or pressure-temperature relationships.

In the Jan. 19, 1953 issue, it was mentioned that Kinetic Chemicals Division of du Pont, manufacturers of the "Freon" refrigerants, had developed a chemical method of detecting even small percentages of methyl chloride in "Freon-12." This method is simple enough that it can be used in the field, and the chemicals and equipment are readily available from drug houses, or in some cases from drugstores.

Immediately after this statement appeared, we had several inquiries for this method. Kinetic Chemicals readily gave permission to furnish information on this method.

One reader in South America wrote that as a result of the very high price of "Freon-12" there, due to transportation and duties, some servicemen were suspected of surreptitiously using methyl chloride and charging the price for "Freon-12". This reader was supplied with a copy of Kinetic's test method.

Occasionally we still get requests for copies of this test. We did not realize that there would be that many instances where it was desirable to test for the presence of methyl chloride in "Freon-12."

Perhaps, therefore, there are other readers who would like to know this method of testing "Freon-12" for the presence of small quantities of methyl chloride.

Kinetic Chemicals has kindly consented to our publishing it as follows:

"The problem has been posed of determining quickly the presence of methyl chloride in 'Freon-12.'

"In developing the following method, the facts have been utilized that methyl chloride may be hydrolyzed with piperidine in a wet methanol solution and the freed hydrochloric acid detected by the formation of a silver chloride cloud upon the addition of a silver nitrate solution.

" 'Freon-12' is a stable refrigerant and is not hydrolyzed by piperidine under the test conditions. With this method, as small an amount of methyl chloride as .5% by weight can be detected in the 'Freon-12.' Less than 2 g. of refrigerant are required for the test.

"We are hoping that those who supply the serviceman will be interested in making the small kits for his use. They will not be expensive. No patent applications have been made by us and no royalties are involved. As an organization devoted to servicing the refrigerating machinery industry, we gladly give the idea to the trade. However, we assume no responsibility connected with its use. The kits can be made up by a laboratory or pharmacy according to the formula.

"Solution A (volume 7.4 ml.):

1.0 gram (1.1 ml.) piperidine
5.0 grams (6.3 ml.) methyl alcohol, C.P.
0.1 gram (0.1 ml.) distilled water.

In clean 6 dram glass vial rinsed with methyl alcohol, lead lined bakelite screw cap.

"Solution B (volume 11.3 ml.):

0.1 gram silver nitrate, C.P.
2.0 grams (1.4 ml.) nitric acid, C.P., d. 1.42
10.0 grams (10.0 ml.) distilled water.

In clean 4 dram glass vial rinsed with distilled water, oil paper lined bakelite screw cap.

"Four inch length of clean 7 mm. (or 8 mm.) glass tubing, fire polished at ends, rinsed with methyl alcohol.

"Four inch length of clean ¼ in. rubber or synthetic rubber tubing, rinsed with methyl alcohol.

"Methyl alcohol, distilled water, silver nitrate, nitric acid, vials and caps, and glass and rubber tubing are carried in stock by most scientific supply houses. Piperidine may be ordered through any scientific company. It is advisable to use fresh piperidine of the best quality available. However, a yellow coloration is not harmful.

"It will be convenient to make up some multiple of formula A in a clean glass stoppered bottled and accurately measure 7.4 ml. of this solution into each 6 dram vial. Likewise, a multiple of formula B may be made up in a clean glass stoppered bottle and a 11.3 ml. portion of this solution added to each 4 dram vial. One kit from each lot should be checked by mixing the two solutions and stirring with the glass tube. The mixture must be perfectly clear.

DIRECTIONS FOR DETECTING METHYL CHLORIDE IN 'F-12'

"Provide a valved outlet and ¼-in. copper tubing from the vapor phase of the 'Freon-12' system to be tested.

"Open the valve slightly and clear the valve and the short length of copper tubing of liquid refrigerant and oil; then close valve tight.

"Connect glass tube to the copper tube with the rubber tubing.

"Support the larger vial (Solution A) containing the piperidine in an upright position. Insert end of glass tube into the large vial so that the end of the glass tube is ¼ in. above bottom of the vial.

"Carefully open refrigerant vapor valve until three bubbles per second are obtained.

"Bubble refrigerant vapor through solution in large vial for 15 minutes.

"Then add contents of smaller vial (solution B) containing silver nitrate slowly and carefully to the larger vial. Any turbidity, milkiness, cloudiness, or opalescense of the liquid means that this sample of 'Freon-12' has been contaminated with methyl chloride or some other adulterant.

"Only new or thoroughly cleaned and dried vials should be used, as vials cleaned and wet with chlorine treated water may give false results. Use new solutions for each test.

"Vapor valve to control refrigerant vapor bubbles must be opened slowly and care should be exercised to protect clothing and skin from the solutions. Also, large lens spectacles or goggles should be worn to prevent damage to the eyes. Silver nitrate and nitric acid are corrosive chemicals and may cause injury to the skin, eyes, and clothing."

SUBSTITUTION AND MIXTURE OF REFRIGERANTS

There are so many factors to be taken into consideration in the selection of a refrigerant, that substitution of another refrigerant for the original one for which the equipment was designed should rarely be done; and this applies also to mixing refrigerants.

It is a good rule to follow to never substitute nor mix refrigerants except with the specific approval of the manufacturer of the equipment, and especially the manufacturer of the compressor and condensing unit.

In this connection, one naturally thinks of mixing some "Freon-12" in with "Freon-22" in order to improve the oil-return characteristics of "Freon-22" when used with certain types of equipment. In some instances, this practice has been approved by the equipment manufacturer, in amounts from 3% to as much as 40% of "Freon-12."

To the best of the author's knowledge Kinetic Chemicals has never encouraged nor approved this practice. While there are no chemical reactions between "Freon-12" and "Freon-22," there may be physical considerations that may be fully as important as the chemical ones; such as separation of the two refrigerants in different parts of the system.

Adding "Freon-12" to "Freon-22" systems seems to be a controversial subject; some reports from the field are favorable and some unfavorable.

This column knows of no method that is applicable to field use for determining whether any "Freon-12" has been added to a "Freon-22" system—or vice versa; nor in fact whether any of the "Freons" have been mixed with other "Freons." So the best plan is to use only the refrigerant in an installation for which the equipment was designed.

If however, there is good reason to suspect that someone else has mixed refrigerants in a system, and particularly, of course, if the equipment is not operating properly, then about the only thing to do is to remove all of the refrigerant from the system, pump a good vacuum, and recharge with the proper refrigerant.

Motor Repairman Protects Against Overloads With KLIXON Protectors

STAMFORD, CONN.: William R. Palmer, Jr., owner of Palmer's Electric Motor Repair Shop, speaks from many years of experience in repairing motors.

"It has been our experience as electric motor repair specialists, that equipping motors with Klixon motor protectors has greatly lessened the number of motor burnouts due to overloading."

Manual Reset

Automatic Reset

Klixon Protectors Reduce Service Calls and Repairs by Preventing Motor Burnouts

The Klixon Protectors illustrated keep motors in electrical appliances and other motor-driven equipment from overheating and burning out. Look for equipment with Klixon-Protected motors for trouble-free motor operation.

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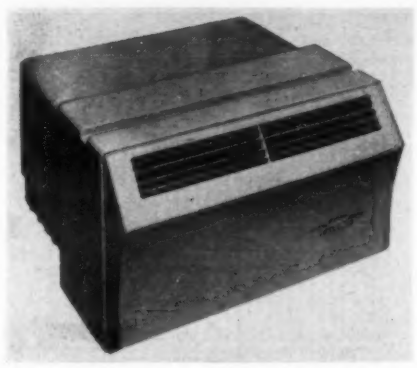
WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS



PLASTIC CABINET is featured by UsAirco.

UsAirco--

(Concluded from Page 1, Column 4)

design which extends less than 2 in. into most rooms; thermostatic control as standard equipment on all models; a simplified pushbutton concealed control panel; two-speed fan motor to provide quiet night operation and increased dehumidification, if desired; damper operation which permits exhaust of stale room air and intake of fresh air simultaneously; a simplified, screwless mounting bracket, so that installation will not mar window frames; and a number of other features.

In addition to the inside and outside cabinets, the base pan, window blockoffs and interior parts, including the partition, blower housing, and fan shroud, will be constructed of Fiberglas. The only remaining steel cabinet parts will be the plenum chamber, switch cover, mounting bracket, and motor base.

Three models, with cooling capacities of ½, ¾ and 1-ton, respectively, will feature the electric strip heating feature as standard equipment, while the reverse cycle units will be produced in ¾ and 1-ton sizes, according to Peoples.

List prices will be $329.95 for ½-ton, $389.95 for ¾-ton, and $439.95 for the 1-ton model. Prices on heat pump units will be announced later.

Production for 1954 will be increased by 50% over 1953.

The Fiberglas cabinet features a light, neutral color, designed to blend into any interior decoration scheme. The inside cover is hinged at the bottom and opens a distance of several inches at the top to provide access to the pushbutton control panel.

Six buttons control the major functions of the equipment. "Cool-high" provides maximum cooling, air circulation, and filtering. "Cool-low" is designed for quiet night operation or for increased dehumidification, which results from the slower movement of air over the cooling coils.

"Fan-high" and "Fan-low" provide air circulation and filtering at the two speeds of the fan motor. The two remaining buttons are for heating and turning the equipment off.

Excise Tax--

(Concluded from Page 1, Column 5)

unit is specifically designed for use other than in connection ith household-type refrigerators or household-type quick-freeze units.

"For the purpose of this ruling 'evaporator temperatures' shall be defined as under 15° F. and 'low torque' shall be defined as motors having locked-rotor torque conforming substantially to Type 1, section MGI-77B of 'Standards for Fractional Horsepower Motors' published by NEMA, publication No. MG-1951 or subsequent revisions thereof.

"The above expressed our general position regarding the taxibility of compressors or condensing units. Where a compressor condensing unit is within the taxable specifications, but may be specifically designed for a nontaxable use, the manufacturer thereof may secure a ruling on the individual unit from this office.

"The request for a ruling should be accompanied by specifications and illustrations of the unit and a detailed statement of the reasons why such unit is not within the taxable class."

New NEMA Heads--

(Concluded from Page 1, Column 2)

Elected vice-chairman was H. J. Miller, manager of appliance sales department of Frigidaire. Milton Kalischer, manager of engineering, electric appliance division, Westinghouse Electric Corp., was named chairman of the refrigerator section's general engineering committee.

Elected chairman of the farm and home freezer section was J. H. Overmyer, vice president in charge of sales for Revco, Inc. New vice-chairman is P. B. Thompson, assistant product specialist, refrigeration sales, International Harvester Co.

Officers elected by the dehumidifier section included: Chairman, W. L. Jeffery, sales manager, refrigeration and ranges, Kelvinator; vice-chairman, H. F. Hildreth, manager, refrigeration specialties department, electric appliance division, Westinghouse; chairman of general engineering committee, R. H. Tull, section manager, refrigeration appliance specialties engineering, Westinghouse.

ASRE Program Set for Dec. 6-9 Meeting--

(Concluded from Page 1, Column 3)

the fourth group will constitute a Water Conservation symposium, presided over by Edward Simons, past president, ASRE, and will deal with this subject from the standpoint of four different types of water conservation equipment.

With the many attractions of the National Capital as a background, the local convention committee, chairman, Harvey W. Hottel, has arranged an attractive program of vaudeville, dinner dances, sightseeing and inspection trips, to appeal to a wide variety of tastes.

Included in this program are: a motion picture depicting a dramatic story of the delivery to its target of an "A" Bomb; fashion show and luncheon-tour through the Pan-American Bldg. for the ladies; inspection trips to National Institute of Health; the David Taylor Model Basin including the supersonic wind tunnel where the temperature of the air drops 230° in eight seconds; the air conditioning installation of the Pentagon; concluding with the popular traditional "no speeches" ASRE dinner dance.

The program follows:

MONDAY, DEC. 7

A. M.—first technical session, President R. C. Jordan presiding.

"Heat Transfer Potential Between Moist Air and Water," F. Rasori, Montreal, Canada, to be presented by Edward Simons.

"Environmental Research and Its Relation to Human Health and Comfort," F. K. Hick, University of Illinois, Urbana, Ill.

"Measurement and Control of Humidity in Air Gases," J. C. Hawkins, the Foxboro Co., Foxboro, Mass.

"Thermometer System," L. E. Smith, the Bristol Co., Waterbury, Conn.

Domestic Refrigerator Engineering Conference, R. W. Ayres presiding.

Panel discussion on "Recent Developments in Plastics for Refrigerators and Home Freezers."

Panel members: J. C. Kazmier, Amos Molded Products, Edinburg, Ind.; C. Massopust, General American Transportation Corp., Chicago; D. Eldred, General Tire and Rubber Co., Wabash, Ind.; R. H. Morehouse, Kent Plastics Corp., Evansville, Ind.; R. W. Barber, Panelyte Div., St. Regis Paper Co., Trenton, N. J.; H. Q. Hoppens, Plaskon Div., Libbey Owens Ford Glass Co., Toledo; W. C. Schlager, Regal Plastic Co., Kansas City, Mo.; E. Szantay, Sandee Mfg. Co., Chicago.

"The World of Color," H. C. Doner, Libbey Owens Ford Glass Co., Toledo, to be presented in addition to panel discussion.

Noon—Welcome luncheon, speaker to be announced.

P.M.—Second technical session, Vice President A. J. Hess presiding.

"Drying Methods and Techniques," L. W. Larsen, Tecumseh Products Co., Tecumseh, Mich.

"Freeze Drying 1953," E. W. Flosdorf, F. J. Stokes Machine Co., Philadelphia.

"The Effect of Climatic Environment on the Growth Rate and Feeding Efficiency of Swine," W. L. Sibbitt, Purdue university.

"Influence of Storage Conditions on Drying and Discoloration of Beef," Merl Baker, E. B. Penrod, University of Kentucky, Lexington, Ky.

Heat Pump Symposium, J. R. Hornaday, program chairman, presiding; Prof. C. H. Coogan, Univ. of Connecticut, moderator.

"A 1953 Appraisal of Heat Pumps," H. E. Voegeli, American Brass Co., Waterbury, Conn.

"A Thermodynamic Study of Vapor Compression Heat Pump Cycles," J. L. Threlkeld, Univ. of Minnesota, Minneapolis, Minn.

"Sizing Earth Heat Pumps For Three Different Latitudes," E. B. Penrod, University of Kentucky.

"Heat Pump Performance in Western Pennsylvania," C. L. Goodman, West Penn. Power Co., New Castle, Pa.

TUESDAY, DEC. 8

A.M.—Third technical session, Vice President Leon Buehler, Jr., presiding.

"The Solubility of 'Freon' Refrigerants in Water, Compounds Boiling Below 32° F.," H. M. Parmalee, E. I. du Pont de Nemours & Co., Inc.

"Heat Transfer of Evaporating 'Freon' with Inner-Fin Tubing," Cecil Boling, W. J. Donovan, A. S. Decker, Bush Mfg. Co., W. Hartford, Conn.

"The Effect of Convection and Moisture Deposition On Heat Transmission Through Cold Storage Walls," H. C. Brown and L. G. Bish, Armstrong Cork Co., Lancaster, Pa.

"Improved Cold Storage Insulation Through Use of Dehumidification," O. D. Colvin, Cargocaire Engineering Corp., and H. H. R. Niemann, Hamburg, Germany.

"Corrosion in Cooling Water System," J. J. Maguire, W. H. & L. D. Betz, Inc., Philadelphia, Pa.

Air conditioner conference, Justin Neuhoff presiding.

Subject: "Packaged Air Conditioners for Commercial and Industrial Applications."

G. S. Jones, Jr., Air Conditioning and Refrigeration Institute, keynote speaker.

"There Is No Magic In Refrigeration From Heat," V. M. Simpson, Servel, Inc., Evansville, Ind.

"Self-Contained Air Conditioner—Product Quality Improvement," R. G. Cordes, General Electric, Bloomfield.

"Marketing Programs Which Can Make the Packaged Air Conditioner Business More Year-Round," J. R. Hertzler, York Corp., York, Pa.

WEDNESDAY, DEC. 9

A.M.—Fourth technical session, C. M. Ashley, treasurer, presiding.

"What Standards Have Done To Promote The American Economy," Rear Admiral G. F. Hussey, American Standards Association, New York, N. Y.

"Influence of Standards on Refrigeration Industry," J. R. Chamberlain, York Corp., York, Pa.

Motion picture film depicting "Properties of Metals at Ultra-Low Temperatures" presented by Dr. W. B. Hanson, National Bureau of Standards, Washington, D.C.

"Air Conditioning In the Textile Field," W. L. Fleisher and J. H. Burges, Air & Refrigeration Corp., New York, N. Y.

Water conservation symposium, John Engalitcheff, Jr., presiding.

Introductory remarks, Edward Simons, moderator.

"Large Built-Up Cooling Towers," R. C. Kelly, Cooling Tower Institute, Palo Alto, Calif.

"Factory Assembled, Smaller Cooling Towers," representative of Acme Industries, Inc., Jackson, Mich.

"Evaporative Condensers," N. E. Rex, Carrier Corp., Syracuse, N. Y.

"Air-Cooled Condensers," S. C. Segal, Kramer Trenton Co.

Quiet Kool--

(Concluded from Page 1, Column 4)

24½ in. to 36 in. wide, and can be fitted into casement windows without cutting the sash through the use of a special casement window kit which is available with the units at a small additional cost. Physical size of the Compact models is 24 in. wide, 20 in. deep, and 15⅛ in. high, and they project 12⅛ in. into the room and 7⅞ in. outside the window. Cooling capacities are rated up to 175 sq. ft. for the ⅓ hp. and 250 sq. ft. for the ½-hp. air conditioners. This series is manufactured in the 115-volt, 60 cycles only.

The Custom series consists of the ½-hp., ¾-hp., and 1-hp. conditioners. The controls for the Custom series are color-coded, pushbutton type, and are conveniently grouped behind the left grille, which is hinged so that it swings downward. The controls are sealed when they are not needed by swinging the left grille into place. Physical size of the Custom series is 26⅝ in. wide, 28⅜ in. deep, and 15½ in. high, and they project 12⅜ in. into the room, and 16 in. outside the window. These units are easily installed in any double hung window.

Cooling capacities are rated up to 250 sq. ft. for the ½ hp.; 400 sq. ft. for the ¾ hp.; and 500 sq. ft. for the 1 hp. The ½ hp. is manufactured in 115-volt, 60 cycles; ¾ hp. in 115, 208, 230 volts in 60 cycles, and 230 volts, 50 cycles for export. The 1 hp. is 208 and 230 volts, 60 cycles, and 230 volts, 50 cycles for export.

A color preference survey was made and a neutral, subdued grey-green was selected as the 1954 color. All models are supplied with high impact plastic grilles in a contrasting shade of grey-green. These plastic grilles eliminate condensation of moisture on the grilles and also provide easy four-way directional air control. Room air is drawn through an opening at the lower edge of the cabinet in both series. Additional air in the Custom series is also drawn through louvers in the front of the cabinet. No air is drawn through the sides of the units.

Suggested list prices are as follows:

			Standard
H3A1	⅓ hp.	115v/60C	..... $199.95
H5A1	½ hp.	115v/60C	..... 279.95
H7A1	¾ hp.	115v/60C	..... 351.95
H10A2	1 hp.	230v/60C	..... 414.95

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widely acclaimed as America's finest . . . with a Merchandising Program that is setting the market pace!

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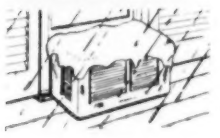

Only the *original* JIFFY COVER of genuine extra-heavy gauge Randflex Plastic has a sewn-in label to signify *the* genuine. Two-color card inserted to help sell *exclusive* features: precision made for tailor-made fit, metal reinforced sides and corners, resists flame, grease, oil, acids, *completely* weatherproof. Compare! Get swatch of Randflex, contact Mr. Mack:

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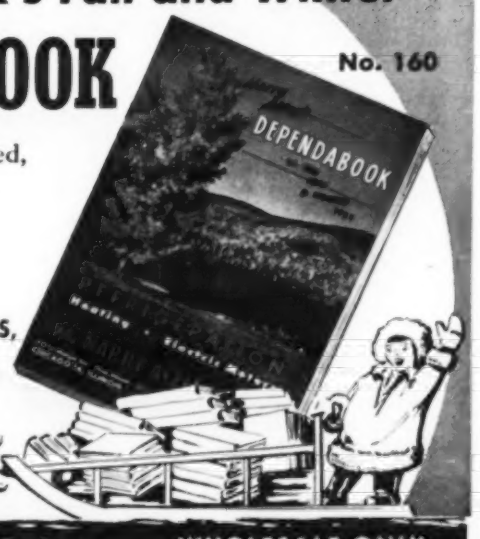

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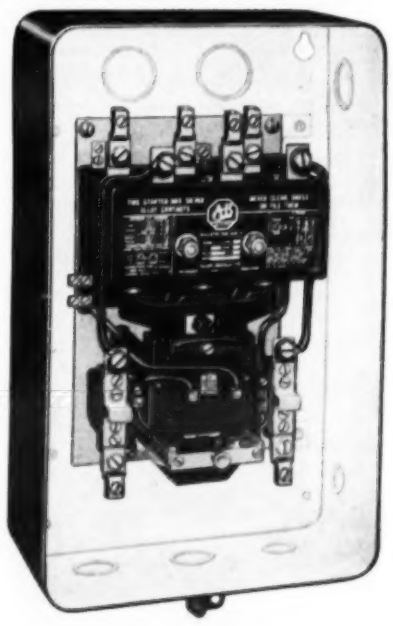

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A-B Quality

ALLEN-BRADLEY SOLENOID MOTOR CONTROL

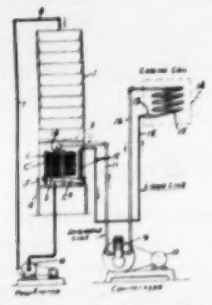
QUALITY

PATENTS

Week of July 7

(Continued)

2,644,322. ATMOSPHERIC CONDENSER APPARATUS. Andrew Y. Preble and Earl K. Hinson, El Centro, Calif. Application August 26, 1949. Serial No. 112,512. 4 Claims. (Cl. 62—154.)



1. In condenser apparatus for operation in a water cooled system, the combination of a plurality of condenser coils disposed in spirals about a substantially vertical axis, and forming a bank, said coils having adjacent relatively elevated inlet ends, adjacent the axis of said coils, and having adjacent relatively depressed outlet ends, an inlet header, disposed adjacent said axis connected to said elevated ends of the spiral coils, for supplying the vapors under pressure thereto, to be condensed in the same, so that the liquid of condensation flows down by gravity through the coils, an outlet header disposed adjacent the perimeter of said bank connected to the outlet ends of said coils, a receiver connected to the lower end of said outlet header, means for spraying said coils with air cooled water to accelerate the condensing effect, said receiver having an outlet connection for delivering the liquid under pressure to an expansion valve of a cooler.

AVAILABLE FOR LICENSING OR SALE

General Electric Co. offers the following patents for non-exclusive licensing, upon reasonable terms, to domestic manufacturers. Applications for license may be addressed to the Manager, Patent Services Department, General Electric Co., 1 River Rd., Schennectady, N. Y.

The following four patents relate to: A frozen food drawer for refrigerators; a sliding door for an open top refrigerator display cabinet; a tube seal for home freezers; and a fastening device for clamping a front panel to the main body of a radio cabinet of the like wherein a minimum of frontal area is occupied by the device.

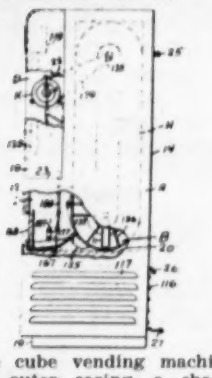
Pat. 2,613,123. Frozen Food Drawer for Refrigerators. Oct. 7, 1952. Group 35—84. Reg. No. 50,976.

Pat. 2,613,844. Sliding Door Assembly. Oct. 14, 1952. Group 35—84. Reg. No. 50,977.

Pat. 2,614,398. Tube Seal. Oct. 21, 1952. Group 35—84. Reg. No. 50,978.

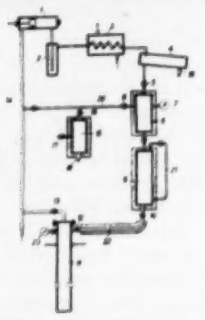
Week of July 14

2,645,092. ICE CUBE VENDING MACHINE. Robert H. Ridnour, Sioux City, Iowa. Application Aug. 2, 1950, Serial No. 177,299. 3 Claims. (Cl. 62—2.)



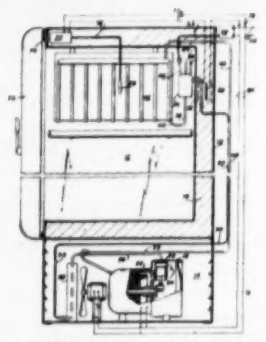
1. An ice cube vending machine comprising an outer casing, a chamber in said casing, a plurality of normally collapsed foldable containers in said chamber, means for advancing said containers to a water filling position, whereby said containers will be expanded, refrigerating means for freezing the water in said containers into ice cubes, means for automatically discharging said containers containing said ice cubes thus formed in sequential relation, said water filling means including a plurality of compartments each of which includes a measured water supply consistent with the capacity of each part of said containers, said containers having openings therein wherein said water will flow.

2,645,093. APPARATUS FOR CONGELATION OF GROUND. Jean Pierre Daxelhofer, Zurich, Switzerland. Application June 21, 1948, Serial No. 34,236. In Switzerland June 23, 1947. 2 Claims. (Cl. 62—2.)



1. Apparatus for the congelation of ground, comprising a compressor for a gaseous carbon dioxide, as refrigerating agent, a condenser for liquefying the compressed gas, an expansion chamber for reducing the pressure of the liquefied gas, a measuring chamber connected to the expansion chamber, refrigerator tubes connected to the measuring chamber, control means for supplying measured quantities of liquefied refrigerating agent to the refrigerator tubes, a suction conduit establishing communication between the refrigerator tubes and the compressor, and a reservoir adapted to contain a supply of solid carbon dioxide and communicating with the refrigerating circuit to compensate losses of the refrigerating agent in the system.

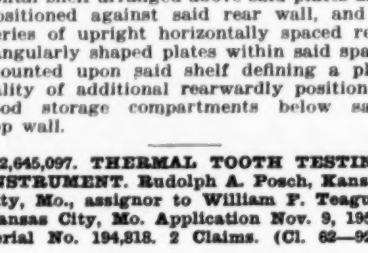
2,645,094. REFRIGERATION APPARATUS. Graham S. McCloy, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application March 1, 1950, Serial No. 146,960. 7 Claims. (Cl. 62—4.)



1. In a refrigerator comprising a chamber and refrigerating apparatus, said apparatus comprising a low pressure side including a cooling unit for cooling said chamber and means for periodically defrosting said cooling unit, said means including an accumulator of refrigerant liquid, said apparatus also including a high pressure side for condensing the refrigerant vapor produced in said low pressure side, a pump for transferring refrigerant vapor from the low pressure side to the high pressure side, a temperature-responsive element for controlling said pump, said element being responsive to the temperature of the air in said chamber, and a tubular heat-conducting member having upper and lower ends, the upper end of said member being closed and arranged in heat-transfer relationship with said element and the lower end thereof communicating with said accumulator, the construction and arrangement of said member being such that its conductivity is relatively low when said accumulator is colder than said element and relatively high when said accumulator is warmer than said element.

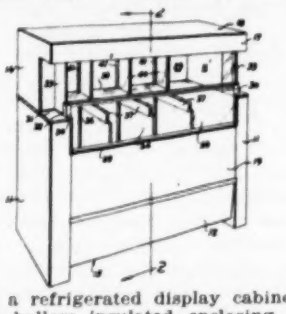
2,645,095. AUTOMATIC ICE MAKING MACHINE. Clyde E. Ploeger, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application May 13, 1950, Serial No. 161,827. 9 Claims. (Cl. 62—4.)

1. An ice making machine having surfaces on which liquid is frozen and ice released therefrom, means for cleaning said surfaces comprising a structure cooperating with the surfaces for retaining a cleaning liquid in contact with at least a portion of said surfaces, reciprocating mechanism for actively agitating the cleaning liquid to cause it to continuously contact and bathe the surfaces, and a



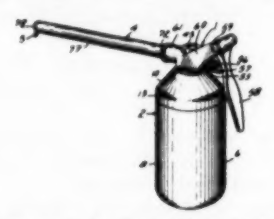
connection for draining the cleaning liquid from the machine.

2,645,096. REFRIGERATED DISPLAY CABINET CONSTRUCTION. Fred Kuhn, Detroit, Mich. Application Aug. 17, 1951, Serial No. 242,385. 6 Claims. (Cl. 62—89.5.)



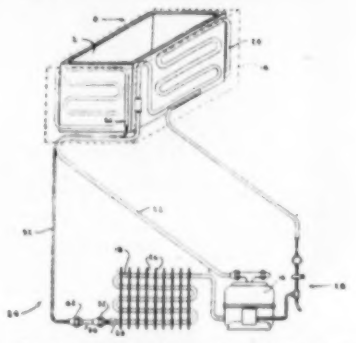
1. In a refrigerated display cabinet including hollow insulated enclosing walls including front, rear, side, top and bottom walls, defining a substantially enclosed refrigerated space, the top horizontal edge of said front wall being downwardly spaced from said top wall permitting access to the interior of said space, a series of upright horizontally spaced rectangularly shaped plates within said space mounted upon said bottom wall and interposed between said front and rear walls defining a plurality of food storage compartments, a rearwardly displaced horizontal shelf arranged above said plates and positioned against said rear wall, and a series of upright horizontally spaced rectangularly shaped plates within said space mounted upon said shelf defining a plurality of additional rearwardly positioned food storage compartments below said top wall.

2,645,097. THERMAL TOOTH TESTING INSTRUMENT. Rudolph A. Posch, Kansas City, Mo., assignor to William P. Teague, Kansas City, Mo. Application Nov. 9, 1950, Serial No. 194,818. 2 Claims. (Cl. 62—92.)



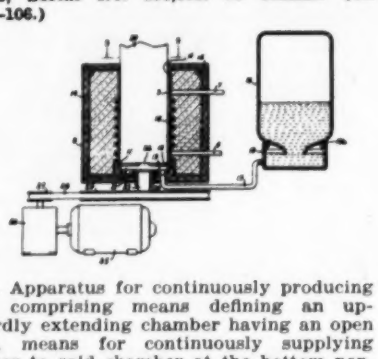
1. A thermal tooth testing instrument comprising, a housing for holding a quantity of expansible refrigerating medium, said housing having passages therein for flow of refrigerating medium from the housing, valve means in the housing having means operative in the passages for obstructing discharge flow of refrigerating medium from the housing, means extending exteriorly of the housing and operatively engaged with the valve means for selectively operating same to effect discharge flow of refrigerating medium from the housing, an elongated tube having one open end and an orifice in the other end, said tube being mounted on the housing with the open end of said tube in communication with a passage in the housing for flow of refrigerating medium through the tube, a second tube concentric with and surrounding the first tube and spaced therefrom, said second tube having one end sealingly secured to the first tube adjacent the open end thereof, a cap closing the other end of the second tube and forming a chamber at the end of the first tube for receiving discharge of refrigerating medium from the orifice, said second tube having exhaust ports adjacent the end secured to the first tube, and a tip of high thermal conductivity extending from the cap at an angle to the axis of the tubes, said tip having an interior recess extending therein from the chamber whereby discharge of refrigerating medium through the orifice into the expansion chamber and interior recess of the tip permits expansion of the refrigerating medium and effects reduction of the temperature of the tip for contacting a tooth to be tested, said expanded refrigerating medium flowing between the tubes and through the exhaust ports.

2,645,099. CAPILLARY TUBE ASSEMBLY FOR REFRIGERATORS. Alfred S. Cumming, Detroit, Mich., assignor to Bailey-Perkins, Inc., Detroit, Mich., a corporation of Michigan. Application Sept. 29, 1950, Serial No. 187,403. 2 Claims. (Cl. 62—115.)



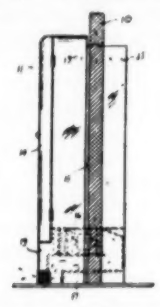
1. In a refrigerating apparatus having a compressor, a condenser, an evaporator, and conduit means connecting the evaporator, compressor and condenser in the order named, a capillary tube assembly for conducting liquefied refrigerant from said condenser to said evaporator, said capillary tube assembly comprising an outer tube secured to the inlet of said evaporator, a capillary tube disposed entirely within said outer tube and having one end thereof communicating with said evaporator inlet, a fitting secured to the other end of said capillary tube and having a fluid flow passage therethrough communicating with said capillary tube, means for detachably connecting said fitting to the outlet of said condenser, and means for detachably securing said outer tube to said fitting, said capillary tube being arranged in heat exchange relation with a portion of the conduit means connecting said evaporator and said compressor, said capillary tube being arranged within said outer tube so as to be removable therefrom when said outer tube and said condenser outlet are detached from said fitting.

2,645,098. CONTINUOUS ICE MAKING APPARATUS. Alfred G. Janos, Erie, Pa., assignor to General Electric Co., a corporation of New York. Application Nov. 16, 1950, Serial No. 196,008. 10 Claims. (Cl. 62—106.)



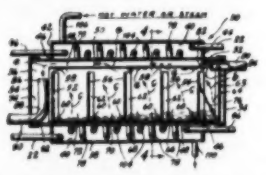
1. Apparatus for continuously producing ice comprising means defining an upwardly extending chamber having an open top, means for continuously supplying water to said chamber at the bottom portion thereof, means for refrigerating said chamber to freeze said water into a column of ice, a rotatable cam disposed near bottom of said chamber and directly and continuously engaging the bottom of said ice column, and means for continuously rotating said cam in the same direction to lift said ice column, said water-supplying means causing water to flow into said chamber below said ice column as said ice column is continuously raised by said cam.

2,645,100. LOW TEMPERATURE FOOD STORAGE BOX STRUCTURE WITH MEANS FOR COOLING MACHINERY COMPARTMENT. Hugh W. Bascom, Panora, Iowa. Application June 5, 1950, Serial No. 166,241. 2 Claims. (Cl. 62—117.4.)



1. A refrigerator cabinet having the air inlet and outlet for the refrigerator compressor positioned at the lower front of the cabinet to facilitate sealing the back and sides of the cabinet to adapt the refrigerator to being recessed in a wall; said cabinet having a passageway formed in its bottom front and extending rearwardly therefrom to a vertical wall; the air inlet and outlet of the refrigerator compressor communicating with the top of said passageway; whereby air for the refrigerator compressor enters and exhausts solely at the front of said refrigerator cabinet; said passageway serving and appearing to serve solely as a toe receiving hole.

2,645,101. DEFROSTING ARRANGEMENT IN REFRIGERATION SYSTEM. Louis P. La Porte, Rolla, Mo., assignor to Francis L. La Porte, Burlingame, Calif. Application Sept. 25, 1951, Serial No. 248,246. 13 Claims. (Cl. 62—117.55.)



1. In a refrigeration system including a compressor, a condenser, a receiver, an expansion valve, an evaporator, and conduit connections between them for circulating a refrigerant: a combined liquid flow retarding and vaporizing assembly interposed in the conduit connections between the compressor and the evaporator; said assembly including a first or inner cylindrical shell sealed at either end by a closure member to provide an elongated chamber within the shell; a second or outer cylindrical shell of larger diameter concentrically disposed about said first shell and having end walls whereby to provide a sealed annular chamber about the latter shell along the major portion of its length; a metallic insert member positioned in said elongated chamber and having rigidly secured thereto an end plate and a plurality of vertical baffle plates in spaced relation to one another whereby to subdivide said elongated chamber into a plurality of compartments; an orifice formed in each baffle plate in the lowermost region thereof for establishing fluid communication between adjacent compartments; means for introducing refrigerant returning from the evaporator into one of the compartments of said elongated chamber; means provided in the said compartment for preventing extraneous matter in the refrigerant clogging the orifices in the baffle plates; means for heating said elongated chamber by the introduction of a selected fluid medium into said annular chamber and about said inner shell; and means for delivering refrigerant from said chamber to said compressor.

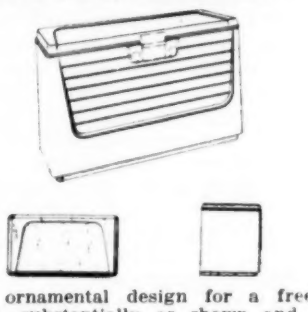
2,645,359. SHELF ASSEMBLY. William R. Jewell, Erie, Pa., assignor to General Electric Co., a corporation of New York.

1. A shelf assembly comprising a main shelf, a pair of slides secured in parallel spaced relationship to the forward side portions of said main shelf, an auxiliary shelf slidably received by said slides, said auxiliary shelf including a U-shaped frame having a front portion and two side portions, a cross member secured between intermediate portions of said side portions in spaced relationship to said front portion, the spacing corresponding substantially to the length of said slides, a supporting surface between said front portion and said cross member, each of said side portions including an arm extending beyond said supporting surface an amount

corresponding substantially to the length of said slides and slidably received by said slides, at least one of said arms being resilient, and a stop formed on the end of said resilient arm for engaging the rear end of a corresponding one of said slides, the resilience of said resilient arm being such that said resilient arm resists deflection and said stop fails to ride over said corresponding one of said slides when a normal pull is applied to said auxiliary shelf whereby said stop limits the forward sliding movement of said auxiliary shelf relative to said main shelf when said supporting surface is fully extended, said resilience of said resilient arm also being such that said resilient arm is deflected inwardly by said stop riding over said corresponding one of said slides only when a greater than normal pull is applied to said auxiliary shelf to afford disassembly of said auxiliary shelf from said main shelf.

DESIGNS

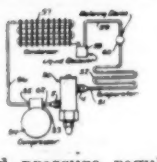
170,002. FREEZER CABINET. Robert D. Budlong, Skokie, Ill., assignor to Amana Refrigeration, Inc., Amana, Iowa.



The ornamental design for a freezer cabinet, substantially as shown and described.

Week of July 21

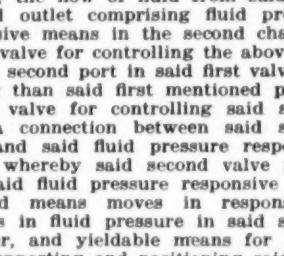
2,645,884. PRESSURE REGULATING VALVE. Edward P. Kellie, Detroit, Mich.



1. In a fluid pressure regulating valve of the type comprising a hollow body divided into first and second chambers, an inlet in the first chamber, an outlet in the second chamber, and a port between said chambers, means for controlling the flow of fluid from said inlet to said outlet comprising fluid pressure responsive means in the second chamber, a first valve for controlling the above said port, a second port in said first valve and smaller than said first mentioned port, a second valve for controlling said second port, a connection between said second valve and said fluid pressure responsive means whereby said second valve moves with said fluid pressure responsive mean as said means moves in response to changes in fluid pressure in said second chamber, and yieldable means for yieldably supporting and positioning said first valve between said fluid pressure responsive means and said second valve, said yieldable means acting between said second valve, said first valve, and saiid fluid pressure responsive means and urging said first valve toward closed position when said second valve is moved toward closed position and urging said first valve toward open position when the second valve is moved toward open position, whereby upon a rise in fluid pressure in said second chamber above a predetermined pressure said fluid pressure responsive means moves said second valve toward closed position and said second valve acts through said yieldable means to urge said first valve in a closing direction to thereby restrict fluid flow between the said chambers and whereby upon a fall in fluid pressure in said second chamber below said predetermined pressure and fluid pressure responsive means moves said second valve toward open position and cast through said yieldable means to urge said first valve in an opening direction.

2,645,911. FROZEN MIX MAKING DEVICE. Philip Martin, North Hollywood, Calif., assignor to Foster's Freeze National Corp., Los Angeles, Calif.

1. In a device for freezing mix of the class having a freezing drum, a rotatable shaft mounted in said freezing drum, and



a helical screw on said rotatable shaft provided with indentations in opposed sections of said screw, the combination with said helical screw of a scraping blade of a substantially smaller thickness than said indentation and adapted to fit within said indentations thereby permitting transverse movement of said blade in said indentation, a plurality of projections on said scraping blade which retain said blade in said indentation.

(To Be Continued)

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11-16-53

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request **to the purchasing officer under which the purchase is listed** in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Bureau of Ships, Washington, D. C.			
Refrigerating Plant Freon, 12 for air conditioning 12-ton to operate on 440 volt 3 phase 60 cy AC with drip-proof motors and controllers, Spec. MIL-R-16743-A, dated 1 Aug. 1952 with modifications as indicated in the Invitation.	24	549-752Q	1 Dec 53
Corps of Engineers, U. S. Army, Office of the District Engineer, 4735 E. Marginal Way, Seattle 4, Washington			
Instl. of dehumidification equipment, General Supply Whse., Mt. Rainier Ordnance Depot, Ft. Lewis, Washington. Work involves instl. 8 Gov't-furn. dehumidification units incl. humidistats 6 hygro-thermographs together with ducts, conduits, wiring and incidentals. No deposit on plans.	Job	(ENG-45-108-54-82B)	3 Dec 53

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Region 2, Business Service Center, 250 Hudson St., New York 13, N. Y.			
Fans, pedestal, 24"	659 ea.	(NY-3T-50683-A)	7 Dec 53
Fans, pedestal, 30"	677 ea.	(NY-3T-50683-A)	7 Dec 53
Fans, radial discharge	1022 ea. (Plus indefinite quantity contract)	(NY-3T-50683-A)	7 Dec 53

Thor Nine-Month Sales, Profit Up Over Year Ago

CHICAGO—Sales by Thor Corp. totaled $28,735,297 during the first nine months of 1953 compared with $22,387,779 for the same period last year, Thor board chairman, Raymond J. Hurley, announced.

Hurley said profits for the 1953 period were $544,732, of $1.58 per share. Profits for the corresponding period of 1952 were $476,494 or $1.42 per share.

Record Nine-Month Sales Boost Westinghouse Net

NEW YORK CITY—Record sales for nine months of 1953 boosted net earnings of Westinghouse Electric Corp. 9.2% over the like period of 1952, President Gwilym A. Price reported to the board of directors.

All four major product groups showed significant sales increases with the company's consumer products reporting the sharpest rise.

Net sales billed of $1,163,538,000 were the highest for any nine months in the company's history, up 11.5% over the sales of $1,043,861,000 for the first nine months of 1952.

The net income for nine months was $53,219,000, compared with $48,741,000 in the same period of 1952.

For the third quarter of 1953—a record third quarter—net sales billed of $383,049,000 represented an increase of 5.7% over the sales of $362,483,000 in the previous record third quarter of 1952.

Farnsworth Represents C. Schmidt In Chicago Area

CINCINNATI—The C. Schmidt Co. has just appointed Robert L. Farnsworth, district sales manager for the Chicago territory which consists of Illinois, Indiana, and Iowa.

For the past four years he has been sales engineer with W. J. Harbers Engineering Co., working in the Chicago area.

Farnsworth will work with dealers and food merchants, promoting the sale of these refrigerated display and storage equipment.

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Major Manufacturer of Commercial Refrigeration Products disposing of overstocked inventory of open type self-service Display Cases.

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Complete with Compressors, motors, starters, valves, pumps & accessories. These machines are now in operation.

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JOHNSON-WINSTON
Fort Randall Dam Project
Pickstown, So. Dak.

OPPORTUNITY FOR SERVICE FIRMS

Refrigeration Manufacturer is interested in contacting reputable service firms for the purpose of establishing a National repair service for room air conditioners. For further details, interested organizations may contact:

Box 4439, Air Conditioning & Refrigeration News

American-Standard Sales, Income Up In 1st 9 Mos.

LOUISVILLE, Ky. — Increases of 10.6% in sales and 25.3% in net income were recorded by American Radiator & Standard Sanitary Corp. during the nine months ended September 30, 1953 as compared with the corresponding period of last year, it was announced by Joseph A. Grazier, president.

Consolidated net sales of the company totaled $222,196,000 in the first nine months of 1953 compared with $200,929,000 in the like 1952 months.

Net income for the 1953 period, after provision for Federal taxes of $13,400,000 and exclusive of dividends of $2,409,831 received from foreign subsidiaries, amounted to $10,336,201. This was equivalent, after preferred dividends, to one dollar a share on common stock. For the first nine months of 1952 American-Standard reported net income of $8,246,580, after Federal taxes of $10,700,000 and exclusive of foreign dividends of $1,965,038. Such net income was equal, after preferred dividends, to eighty cents per common share. Foreign dividends are not included in the company's interim earnings statements but are held in reserve until operating results of the foreign subsidiaries for the full year have been determined.

Consolidated net sales during the three months ended September 30, 1953 were $81,372,000, compared with $76,963,000 in the corresponding months of 1952.

Net income in the 1953 September quarter was $3,923,828, equal to thirty-eight cents a share on the common stock. This compared with net income of $3,087,785, or thirty cents per common share in the September quarter of last year.

Four New Distributors Appointed by Gasinator

CLEVELAND—A. S. Katz, president of Gasinator Mfg. Co. here, has announced the appointments of four new distributors for the company.

They are the Sampson Co., Chicago; Hamburg Brothers, Youngstown, Ohio; Bramley Distributing Corp., Phoenix; and Gasinator Intermountain, Inc. Bramley was named distributor for Arizona and New Mexico, and Gasinator Intermountain's territory includes Utah, Colorado, southern Wyoming, and eastern Nevada.

Pick Hirschbach To Head G-E Dept.'s Builder Sales

BLOOMFIELD, N. J. — Appointment of Lawrence H. Hirschbach as manager of builder sales of General Electric Co.'s Home Heating & Cooling Dept. has been announced by R. C. Robertson, department manager of marketing.

Long active in working with builders, Hirschbach was formerly vice president of Controlaire, Inc., G-E distributor in Fort Lee, N. J.

In joining the Home Heating & Cooling Dept., he returns to G-E after an absence of three years. From 1947 to 1950 he was acting district manager of the New York office in the company's Air Conditioning Dept.

He has also been a design engineer with Gibbs & Hill, consulting engineers of New York City, and a sales representatives with the Fitzgibbon Boiler Co. During World War II he served in the army.

Hirschbach has written extensively on the subject of home heating and cooling for builder and sheet metal trade magazines. He attended Lehigh university and is a member of the Montclair, N. J. Society of Engineers.

Kelley Named Avco Div. Market Development Mgr

CINCINNATI — A program to deepen the appliance penetration for Crosley and Bendix Home Appliances in special market areas is getting under way with the announcement that Jack J. Kelley will be the market development manager for Avco Mfg. Corp.'s Appliance & Electronics Div.

Parker H. Ericksen, Avco vice president and general manager of appliances, announced Kelley's appointment as he revealed the new program. He said the former factory branch manager for Bendix in Detroit would concentrate on selected key market areas to work closely with distributors and dealers.

Until he was appointed manager for Bendix Home Appliances Sales Corp. in Detroit a year ago, Kelley was laundry sales manager for a Boston distribution firm. The previous six years he spent as a district sales manager with another New England distributor.

Eureka Williams Earnings Decline In Third Quarter

NEW YORK CITY—Net earnings after taxes of $106,765 on operations for the third quarter of the calendar year were reported recently by H. W. Burritt, president of Eureka Williams Corp., Bloomington, Ill.

This compares with $173,409 for the same period last year.

Accumulated earnings after taxes for the nine months ended Sept. 30 this year amounted to $339,677, as compared with $303,877 for the same period last year.

Burritt pointed out that this year's sales of the company's civilian products are quite substantially ahead of last year, both for the third quarter and for the nine month period, but billings of defense material are less.

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POSITIONS WANTED

ATTENTION, MANUFACTURERS—Maybe you don't need a full-time writer for your instruction sheets and manuals. In that case, it will pay you to look into a new writing service offered by a practical refrigeration and air conditioning man who can handle clear "American" English. VIRGIL C. JAMES, Cuba, Missouri.

SALES MANAGEMENT, development, and product promotion executive, with ability and extensive experience in the air conditioning, refrigeration, and heating industry, open for position after November 1. Industry acquaintance national with manufacturers, distributors, wholesalers, dealers, and manufacturers' agents. Right age. Aggressive. Large and small corporation experience. BOX 4422, Air Conditioning & Refrigeration News.

AIR CONDITIONING, commercial refrigeration service and installation engineer. Married. Over 18 years' experience on most makes and sizes to 100 tons, except ammonia. Graduate R.A.C.I. Now employed. Contemplating change after first of year. Can furnish references. Will relocate. Welcome all inquiries from reliable, established contractors. Write BOX 4440, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

CONTRACTING FIRM has opening for a man well-grounded in refrigeration and air conditioning, for sales engineering and specification work. Excellent opportunity for right man. W. T. HEANEY COMPANY, INC., 8425 Joy Road, Detroit 4, Michigan.

AIR CONDITIONING ENGINEER. Large manufacturer of heating and air conditioning equipment has opening in engineering department for an engineer with experience in design, specification, and installation of residential and commercial air conditioning equipment. Air conditioning program is being expanded, and opportunity for the proper man is limited only by his ability. Please state qualifications and salary desired in letter. Our organization knows of this advertisement. Replies held in confidence. BOX 4415, Air Conditioning & Refrigeration News.

SALES ENGINEER—Wholesale refrigeration and air conditioning. Experience in contacting servicemen and contractors. Engineering ability in both refrigeration and air conditioning necessary. Good opportunity. Western location, small territory. Give full details with references and recent photograph. Write BOX 4416, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: To assume responsibility of design section of Midwest ice cream cabinet manufacturer. Experienced in low temperature refrigerator cabinet production and development. Give full details in resume, regarding experience in design, equipment, recent salaries, and education. BOX 4435, Air Conditioning & Refrigeration News.

DEALER CONTACT-MAN with wholesale experience, for distributor of leading line commercial air conditioning and refrigeration equipment. Complete promotional program, central Pennsylvania location. Salary and incentive plan, opportunity for advancement. Give experience, references, recent photo, and salary desired. BOX 4441, Air Conditioning & Refrigeration News.

SALES ENGINEER—We need man experienced in estimating and selling commercial refrigeration and air conditioning equipment. Salary and incentive plan. Complete promotional program. Central Pennsylvania territory. Give experience, references, recent photo, and salary desired. BOX 4442, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

NORGE SEALED units needed for re-operation process. Top prices paid. Convert your old units into cash. Give cabinet model number. MODERN REFRIGERATION COMPANY, INC., 12541 E. McNichols Road, Detroit 5, Michigan.

WE WILL purchase any quantity of surplus refrigeration equipment and material. Best cash prices will be paid for compressors, sealed units, motors, valves, controls, including all types of electrical equipment. Please send full particulars. Prompt attention assured. R & R EQUIPMENT COMPANY, 2724 Third Avenue, New York 54, New York.

WANTED: USED Frigidaire relays, type YG2—any amount—will pay 25 cents each. Send relays—we'll send check. UNITED CONTROL REPAIR COMPANY, 342 West 70th Street, New York 23, N. Y.

EQUIPMENT FOR SALE

FANS AXIAL flow, 28" direct connected 7½ HP, 440-3-60 motor, 1750 R.P.M., 20,000 C.F.M. @ ½" S.P., $105.00 each. TA-28, less motor, capacity at 1750 R.P.M., 15,800 C.F.M., $55.00 each. Brand new. Evaporators, Floor type cooler, water defrost, 96,000 BTU/hr @ 10° T.D., 5 HP, 220-3-60 fan motor, $632.00. ED-151, conditioned air evaporators, 1250 BTU/hr @ 10° T.D., $22.00 each. New—in original crates. Write or wire GENERAL AIR CONDITIONING AND HEATING COMPANY, 2001 Peralta Street, Oakland 7, California

HOUSEHOLD SINGLE button temp. controls, type A, setting 12° to 26°, 33 cap. includes mtg. plate 3¾ hole centers rating up to ½ hp. Brand-new, in cartons, ea. $1.95. Small hermetic charging valve ¼ SAE f.p.t. to ¼ SAE flare, a valve for many purposes tested for 300 lb., machined brass, ea. 65¢, 6 to a carton. R & R EQUIPMENT COMPANY, 2724 Third Avenue, New York 54, N. Y.

15 CHEST-TYPE freezers, 5 cubic ft. capacity. Powered by ¼ hp. Coplematic unit. Crated F. O. B. our warehouse. $110.00. RED-E-COLD REFRIGERATOR COMPANY, 2347 South Michigan Avenue, Chicago 16, Illinois.

ATTENTION METER plan organizations: disposing of a large quantity of prominent brand collection meters, reconditioned meters, guaranteed to look and operate like new—full one-year warranty. Model M-12, $3.95. Also, brand new DM-6 meter mechanisms, less cases, $3.95. Extra gears $.35 per set. REMIND-A-METER CORPORATION, 542 West 27th Street, New York, New York.

ATTENTION SERVICEMEN — Send for our 1953 Catalog. Relays, expansion valves, controls, dehydrators, V belts, open & hermetic units. All new merchandise at great savings up to 50%. Sold on Money Back Guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

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FOR SALE: commercial and domestic refrigeration sales and service business, established many years, with stock and best accounts in city. Located in the southern part of Connecticut. Plenty of work for three men. For full particulars, write BOX 4443, Air Conditioning & Refrigeration News.

HOUSEWIFE removes package from adjustable holders in the Stor-Mor Door of the Amana 19-cu. ft. freezer. This door holds up to 96 packages and 20 cans. The Stor-Mor Door holds much of its food in the space-saving food holders which store packages just like a candy machine. As the bottom package is removed, all others in the holder drop one notch and click into position.

AMANA'S new room air conditioner, showing how curved hinged cover drops down for access to controls for adjustment.

Amana Freezers, Room Coolers for '54--

(Concluded from Page 1, Column 2)

sible installing them in any one of 18 positions, ranging from flush-mounted with the window and almost fully outside the room to fully inside the room.

The cabinet is made of a tough, sound-deadening plastic, finished in dark brown, with metallic tan trim. All corners are smoothly rounded, to make the unit attractive-looking, both inside and outside the window. Intake and exhaust louvres are located at the back end of the cabinet. This feature makes possible adjustable installation.

Nerve center of the unit is the glider control panel located "front and center" horizontally across the front of the unit. When not in use, this control is covered by curved, hinged door which becomes a part of the front styling of the unit.

Six different kinds of weather can be made to order by sliding the glider selector to: exhaust, heat, off, cool, dry cool, cool vent, and fan vent. The necessary switching of dampers, compressor, and fans is accomplished automatically once the control is set.

Each of the seven control positions is color-coded and illuminated, making it possible to operate the control easily in the dark.

Instead of the usual system of small air-deflecting vanes, the units are equipped with one large air deflector, making it easy to move the air in any direction. A heating unit is included.

Before air is circulated into the room it is cleaned and purified by an easy-to-get-to Fiberglas filter, which may be replaced when necessary. An effective pump-out system is provided to clear a smoky or musty room. The refrigeration system itself is hermetically sealed, of all-welded construction.

The ½ (50A) and ¾ (75 A)-hp. sizes have the same size cabinets, 25 in. wide, 32¼ in. deep, and 15$\frac{5}{32}$ in. high. The 1-hp. model (100 A) is two inches deeper. Model 50A operates on any standard 115 volt line; 75A on 115 or 230 volts; and 100A on 230 volts only.

Amana's new 12, 15, and 19-cu. ft. upright freezers have been named the "Centennial Line of Freezers" because they make their debut on the 100th anniversary of the establishment of the Amana Colonies, home of Amana freezers.

Key factor in "bringing to fingertip accessibility" the large amount of frozen food in the new freezer is the new, large-capacity, sturdily-built Stor-Mor door. In the model 19, the Stor-Mor door holds up to 96 packages of frozen food and 20 cans of juice concentrates.

The Stor-Mor door is lined with patented space-saving food holders which store packages similar to a candy machine. Packages are piled one on top of the other in vertical racks. As the bottom package is removed, all packages drop one notch and click into position. As a result, the first package stored is the first served.

The space-saving holders in the Stor-Mor door can be adjusted easily to accommodate any standard size frozen food package. The 15 and 19-cu. ft. freezer doors are equipped with Juice Bars, special storage racks for cans of frozen concentrate.

Another factor contributing to the maximum visible storage space in the new freezers is the full-width design of the Stor-Mor door. Because there are no longer out-of-sight corners in the front of the freezer, there is easy access to all the food in the freezer, the company states. It is claimed 25-30% more food is immediately accessible in the new freezers.

The 12-cu. ft. freezer holds 420 lbs. of food; the 15-cu. ft. model can hold 525 lbs. of food; and the 19-cu. ft. model, 665 lbs. of food.

The 15 and 19-cu. ft. models are equipped with four positive-contact freezing shelves, in addition to freezing coils at the top and bottom of the storage space. The 12-cu. ft. model has three refrigerated shelves in addition to coils at top and bottom, and one adjustable wire shelf. All shelves are extra-strong, capable of holding many times their normal load.

White baked-on enamel cabinets are trimmed in "gold," and hardware finished in chrome. Interior trim is gold color and pastel green. Exterior of all freezers is protected by an easy-to-clean, rustproof enamel finish.

Door handle is of the "frame" type, and contains a built-in tumbler lock. Door gasket is a larger balloon section than used previously, and seals over a larger range of adjustments.

Of particular interest to men who install and service Amana freezers is the design of the door hinges, which permits removing the door without removing any screws. This is expected to prove valuable when the freezer must be moved through a small doorway or hall.

Freezers are powered by the Powerpact hermetically-sealed refrigeration system. The complete refrigeration system, which is sealed at the factory, is covered by a five-year warranty. Food stored in the freezer is covered also by a five-year food protection warranty.

Other features include: inside liner of the freezer cabinet firmly attached to the freezer plates, to make it a secondary freezing element; every "positive contact" freezing surface in the freezer is made of aluminum, which transfers heat three times faster than any other metal used in freezers; tubing, which carries the refrigerant throughout the freezer, is securely brazed to the aluminum plates in a "single unit" construction, assuring fastest heat removal.

Amana's freezer line for 1954 will retain three of its present models: model 80, an 8-cu. ft. chest freezer; model 140, a 14-cu. ft. chest freezer; and model 25B, a 25-cu. ft. upright freezer.

SUPER-FLO
FILTER-DRIER

MOLDED REMCAL DRYING
FIBERGLAS DEPTH FILTERING

Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglas depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.

REMCO INCORPORATED
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UNITED'S complete program for fast, effective selling is yours for the asking. Whether a dealer selling freezers to homes and farms or a food plan operator, it will pay you to investigate. Write, wire or phone today.

United
REFRIGERATOR COMPANY
Locust & Walnut Streets
Hudson, Wisconsin

Export Sales Division Scheel International, Inc. 4237 N. Lincoln Avenue Chicago, U. S. A.

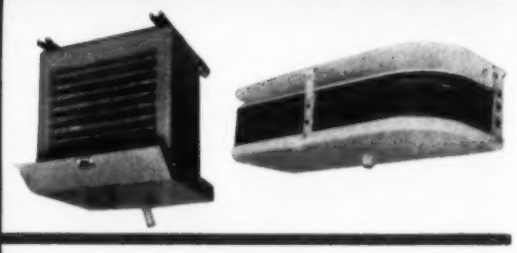
Any trade show is a real work-out. The Cleveland All-Industry Show was no exception. But now, despite the aching feet . . . the dragged-out "I've had it!" feeling . . . we think you'll agree: it was worth it!

We at Bush want to say "Thanks" to you contractors, wholesalers, service engineers and manufacturers who stopped in at our booth. We appreciate the chance you gave us to chat and to demonstrate our recent developments.

INNER-FIN coils such as you saw in operation are being incorporated in the room conditioners and other air conditioning units of many major manufacturers. Our "Under-the-Window" units you saw there are being used in hotels, office buildings, motels, etc. for year 'round conditioning. They might be the answer to your problem next time you have an installation of this type.

If you'd like any more information on these developments, on our new cooling tower for residential applications, or on any of the other units in our extensive standard line, we hope you'll let us know.

Or, call on the Bush sales engineer in your area. You'll find he can be a big help.



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